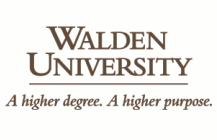

2015

The Effects of a K-12 Dual Language Instruction Program on Student College Readiness

Danielle Adair Cortes
Walden University

Walden University

COLLEGE OF EDUCATION

This is to certify that the doctoral study by

Danielle Cortes

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Review Committee
Dr. Dannett Babb, Committee Chairperson, Education Faculty
Dr. Lucy Pearson, Committee Member, Education Faculty
Dr. Jennifer Keeley, University Reviewer, Education Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University
2015

Abstract

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MA, California State University Northridge, 2005

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Doctoral Study Submitted in Partial Fulfillment

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Doctor of Education

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Abstract

Diverse student populations are increasing in local, state, and national settings. There are achievement gaps in college readiness which must be closed between various student demographic groups. It is important for schools to know what methods work best for language acquisition to close the gaps and open postsecondary opportunities for all students. The purpose of this sequential, explanatory, mixed-method, formative program evaluation study was to examine the effects of a dual language (DL) program on improving the college readiness of students. Guided by the framework of learning and second language acquisition, college readiness levels between DL and non-DL students were examined and the perceived effects of DL as described by parents, students, and teachers were explored. The quantitative portion of the study used descriptive statistics to examine various transcript academic measures between 11 DL and 11 English immersion students. Qualitative interviews were conducted with 2 DL students, 6 English Immersion and DL staff, and a DL parent. The English Leaner students in the DL program passed more Advanced Placement courses and took more Advanced Placement exams than the English Learner students in the English Immersion program. District stakeholders interviewed for the qualitative portion of the study reported positive effects of the DL program including high levels of college preparation and increased parent involvement for the DL program. The study includes a white paper with recommendations for improvement and expansion of the DL program. Positive social change can be created in school districts by implementing effective language programs to prepare all students for the increasing demands of universities and the workplace.

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Dedication

I dedicate this work to my beloved husband, Fermin, for his unending support throughout the journey. He made extraordinary efforts with our children, Tianna, Devon, Alessandro, and Ian in order to give them what they needed and eased my guilt as I worked and missed out on precious family time. I rest assured that our children learned from his love, support, and sacrifice as I took this long road. Mil gracias, cariño.

Acknowledgments

I would like to thank my family for their love and support. My parents taught me to have high expectations for myself and have always believed in me. Their gift has served me well. The support from my husband, children, and sisters has been never-ending.

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Table of Contents

List of Tables

Section 1: The Problem

Introduction

The Latino and English Learner (EL) student populations are increasing locally, in the state of California, and across the nation (California Department of Education, 2012; Block, 2011a, 2011b; Boden, 2011). In California, 52% of students are Latino and 23% of all students are classified as EL (California Department of Education, 2013). Therefore, it is important for schools to determine which methods work best for language acquisition to close the gaps and open postsecondary opportunities for all students. Federal and state programs including education depend on revenue from an educated, tax-contributing citizenry. School districts can create positive social change by implementing programs to prepare students for the increasing demands of universities and the workplace. Dual language programs are based on the theoretical frameworks of learning and second language acquisition and increase student achievement and motivation to attend college. The purpose of this sequential, explanatory, mixed-methods program evaluation study is to measure what, if any, effects a DL program has on improving the college readiness of students. Supporting the academic success of Latino and EL students is of concern for educators and is important for other stakeholders and taxpayers. At-risk students, including English learners, socioeconomically-disadvantaged children, and students of Latino descent, need support in gaining equitable access to rigorous coursework and the necessary academic preparation for college and careers in a global economy (Buysse, Castro & Peisner-Feinberg, 2010; Cates, & Schaefle, 2011; Woolley, Kol, & Bowen, 2009; Yamamura, Martinez, & Saenz, 2010).

Definition of the Problem

California state accountability assessment data of a midsize, suburban, Title I school district, demonstrated that the district is not meeting federal NCLB accountability targets for student achievement (California Department of Education, 2013). In addition, there is a significant achievement gap between demographic groups based on varying socioeconomic status levels and racial groups with White students consistently outperforming Latino students and EL students. According to the California Department of Education (2013), approximately 17,500 pre-K-12 students are enrolled in the district's 38 schools. The two major demographic groups are Latino (47%) and Caucasian (44%). Twenty-two percent of the population is EL students and 60% of students receive free or reduced lunch. The large Latino, socioeconomically-disadvantaged, and EL populations are a growing group of *at-risk* students with diverse learning needs including the need for language acquisition support. *At- risk* students are students who are likely to drop out before graduating from high school (Cates & Schaefle, 2011). Although there are a variety of languages spoken, Spanish is the predominant primary language of EL students in the district. To meet the needs of these EL students, the district offers a structured English immersion program, an early-exit transitional Spanish bilingual program, and two different DL Spanish programs.

When the population for each of the district demographic groups is taken into consideration, NCLB accountability scores demonstrate that less than half of the district's students are achieving at the proficient level. Furthermore, less than 35% of students'

district-wide are classified as *college ready* by the California university systems (California Department of Education, 2012).

Since 2001, overall college enrollment and attainment rates have increased for Latinos, however, the gap between Latinos and Whites has expanded (Boden, 2011; Buysse et al., 2010; Martinez, Cortez & Saenz, 2013). Dropout rates for Latinos have consistently been higher than that of Whites and Blacks since 1972 (Chapman, Laird, and Kewal-Remani, 2013). In 2008, the national dropout rate for Whites was 4.8% and the rate for Latinos was 18.3% whereas in California the rate for Whites was 6.3% and 31.7% for Latinos, a significant gap (Boden, 2011; Chapman et al., 2013). Between 1975 and 2010, the gap between Latinos and Whites completing bachelor's degrees increased by 10% with only 13% of Latinos attaining a four-year degree (Martinez et al., 2013). Factors that contribute to the low rate for Latino students' include EL status, low socioeconomic status (SES) (Cates & Schaefle, 2011; Chapman et al., 2013) and academic underpreparedness (Boden, 2011). Latino students are at higher risk for academic underachievement and dropping out of school, and have lower college acceptance and completion rates (Boden, 2011; Lindholm-Leary & Block, 2010; Lindholm-Leary & Hernández, 2011; Martinez et al., 2013); these factors limit opportunities for increasing social capital and upward mobility (Barnes & Slate, 2013). Limited educational and career opportunities negatively impact state and federal tax bases and contribute to the need for costly programs such as Medicaid, Medicare, and welfare programs (Chapman et al., 2013). Studies have shown that dropping out of high school translates to the lifetime loss of approximately $630,000 in income compared to

the income of a high school graduate (Rouse, 2007). This is a detriment to society as federal and state programs including education depend on tax revenue from an educated, tax-contributing citizenry.

In 2010, 36% of California's students graduated from high school college-ready as defined by the two California University systems, whereas only 25% of Latino graduates met this readiness level (Boden, 2011). Latinos between the ages of 25 and 69 have a 12.4% graduation rate from 4-year universities compared with 37.1% of Whites (Boden, 2011). Taken together, the high percentage of Latino students dropping out of high school, the low percentage of Latino students graduating college-ready, and the low university completion rate for Latinos demonstrates a need for schools to respond to diverse student needs and prepare graduates who are prepared for college and careers.

Dual language programs help close the achievement gap between Latino and White students (Lindholm-Leary & Block, 2010), increase achievement and motivation, and help students form positive attitudes toward college (Lindholm-Leary & Borsato, 2005). The purpose of the study is to examine whether or not DL instruction has affected the college readiness rates of local DL students of varying demographic characteristics including race/ethnicity, EL status, and SES status. I collected data from student transcripts including grade point average (GPA), ACT/SAT scores, completion of coursework towards University of California (UC) a-g requirements, and participation in Advanced Placement (AP) coursework. University of California a-g requirements are core curriculum required by the UC and California State University (CSU) systems for

eligibility for admissions (Boden, 2011). The study informs local school practices and help to develop policies to offer the most effective programs for EL and Latino students, and can also help identify which language program better prepares students for the challenges of college and careers. The implications of the study could support the expansion of successful programs to help meet the needs of Latino and EL students. Supporting the academic success of Latino and EL students is significant not only for educators, but is also of consequence for all stakeholders and taxpayers. Given the growing Latino and EL student populations, it is important for school districts to create positive social change by implementing effective programs to prepare students for the increasing demands of universities and the workplace.

Rationale

Evidence of the Problem at the Local Level

In 1998, the sociopolitical climate and passage of Proposition 227 in California hindered the ability of school districts to provide primary language instruction for EL students (Johnson, 2010). At the same time, Thomas and Collier (1997) published a study which asserts that EL students in a DL instructional program academically outperform EL students in English-Only programs (EO) when long-term results are examined. Despite the antibilingual education sociopolitical climate and educational policy in California in 1999, this midsized suburban district responded by implementing its first DL program. The district currently offers a structured English immersion

program, an early-exit transitional Spanish bilingual program, and two different DL Spanish programs to meet the needs of their diverse EL students.

In 2000, the district established a 90:10 ratio of Spanish to English DL strand in kindergarten at an underperforming Title 1 elementary school to provide a rigorous instructional program designed to support all students in achieving the three stated goals of DL: bilingualism and biliteracy, high academic achievement, and cultural proficiency in two or more cultures (Bearse & de Jong, 2008; Castillo & Sanders, 2013; Lindholm-Leary, 2012). The elementary school offers a 90:10 Spanish English program. In this model, the kindergarten classes are composed of half English-only speaking students and half EL or bilingual Spanish-speaking students. Instruction in kindergarten is 90% Spanish and 10% English. There is a gradual increase in English instruction until a 50:50 balance is established in 5th grade (Castillo & Sanders, 2013; Morren López, 2012). Students continue in DL instruction through middle school and high school ensuring the opportunity to achieve fluency in both languages.

Although the local program routinely evaluates academic performance of K-8 students in various EL settings, there is a gap in practice with regard to the evaluation of high school students' achievement and college readiness. When the populations for each of the districts' student groups are taken into consideration, NCLB accountability scores demonstrated that less than half of the district's students are achieving at the proficient level. Furthermore, less than 35% of students' district-wide are classified as college ready by the California university systems (California Department of Education, 2012). The study addresses the achievement gap and local gap in practice and examines the

effects of a K-12 DL instruction program on student college readiness levels in this suburban, Title I, California school district so that the district can know where to improve and expand their program for the most student benefit.

Evidence of the Problem From the Professional Literature

The need for students to leave high school with the skills to be college and career-ready has become part of the national education agenda as states adopt and implement the Common Core State Standards (Lombardi, Conley, Seburn, & Downs, 2013). These standards are designed to better prepare all students for postsecondary life and provide more postgraduation opportunities (Lombardi et al., 2013). However, new standards may not prepare students for success in the local, national, or international economies. Some researchers have indicated that local districts should design programs to meet local needs (Yong Zhao, 2012). In both cases researchers agree that students need effective academic preparation for post high school success. This study examines academic achievement and college readiness levels of students in a local program designed to meet students' specific language needs.

Although the majority of White students in California graduate high school (94.7%), the graduation rate for Latino students is significantly lower at 69.3% (Boden, 2011). Among those students who graduate, there is a gap between the UC a-g college readiness rates for White students (36%) and Latino students (25%) (Boden, 2011). The increasing Latino and EL student populations in the local, state, and nationwide settings (California Department of Education, 2012; Block, 2011a, 2011b; Boden, 2011) are at-risk for under preparation for college and careers (Boden, 2011; Cates & Schaefle, 2011;

Finkelstein & Fong, 2008; Lindholm-Leary & Hernández, 2011), and are consequently more likely to suffer the financial consequences of a lack of secondary education (Carnevale, Jayasundera, & Cheah, 2012).

When examining student groups of various demographics, educational research tends to exclude English-speaking Latinos from the disadvantaged group because their English proficiency removes them from the at-risk category (Lindholm-Leary & Hernandez, 2011). However, these students are appropriately included in the at-risk group when the focus is on the Latino demographic group, as many English-speaking Latinos are found to be at-risk of leaving high school underprepared for college and careers (Boden, 2011; Block, 2011a; Lindholm-Leary & Hernandez, 2011; Lindholm-Leary, 2010; Lindholm-Leary & Block, 2010; Lindholm-Leary, K. J., & Hernández, 2011).

The DL model has demonstrated evidence of decreased high school dropout rates for Latinos (Lindholm-Leary & Borsato, 2002; Lindholm-Leary & Borsato, 2005). Dual language programs integrate native English speakers and EL students in classrooms that provide instruction in both English and the native language of the EL students (Paciotto & Delany-Barmann, 2011; Alanis & Rodriguez, 2008; Collier & Thomas, 2004). Dual language programs increase student academic performance and attitudes toward college (Collier, & Thomas, 2004; Genesee, Lindholm-Leary, Saunders, & Christian, 2005; Lindholm-Leary & Borsato, 2002; Lindholm-Leary & Hernández, 2011; Paciotto & Delany-Barmann, 2011). The purpose of this study is to determine if DL programs also

increase college readiness levels to better prepare EL and Latino students for college and careers.

Given the growing number of Latino and EL students as part of a traditionally at-risk population, there is a need for educators to respond and address the diverse learning needs of these students. By raising college readiness levels for students from these backgrounds, educators can promote positive social change by increasing opportunities. In the next section I provide definitions to help clarify the jargon of accountability, dual language programs, and college readiness.

Definitions

There are many terms used to describe students in DL programs as well as terms for the various programs and practices under the umbrella of EL education. The distinctions between terms are important and worth noting. In addition, there are specific definitions related to accountability and college readiness. The following definitions clarify the meaning of the words, terms, and acronyms that are used in this study.

Advanced Placement (AP) - A College Board program that provides college-level coursework and college credit by examination for high school students (College Board, 2013).

ACT- A set of college-readiness achievement tests used for college admissions (ACT, 2013).

Academic Performance Index (API) - The foundation of California's Public Schools Accountability Act of 1999; uses a formula to measure the academic performance and growth of schools and districts on a variety of academic

assessments including the California Standards Test (CST) and the California High School Exit Exam (CAHSEE) (California Department of Education, 2013c).

Bilingual Education -The overarching term for educational programs which use primary language instruction (Castillo & Sanders, 2013).

California English Language Development Test (CELDT) - The exam is used to determine annual growth and is an indicator used to consider reclassification of EL students to Reclassified Fluent English Proficient (RFEP) (California Department of Education, 2013b).

California Standards Test (CST) - Academic achievement tests for grades 2-11 used to calculate API for state and federal accountability under NCLB (California Department of Education, 2013a & c).

College Ready - The attainment of the skills needed to be successful credit-bearing first-year courses at a postsecondary institution without remediation (ACT, 2012).

Dual Language (DL) - "Any program that provides literacy and content instruction to all students through two languages and that promotes bilingualism and biliteracy, grade-level academic achievement, and multicultural competence for all students" (Howard, Lindholm-Leary, Sugarman, Christian, & Rogers, 2007, p.1).

English Learner (EL)- A student whose home language survey upon enrollment indicated a language other than English and whose initial CELDT exam score was

not at the proficient level. Students who are classified as EL have not met English proficiency indicators (California Department of Education, 2013b).

English Only (EO) - a student whose initial California school registration form did not list a language other than English on the home language survey (Saunders & Marcelletti, 2013).

Initial English Learners (IEL) - Designation that includes both EL and RFEP students (Saunders & Marcelletti, 2013).

Initially Fluent English Proficient (IFEP) - A student whose initial California school registration form had a language other than English listed in the home language survey and who had "Advanced" on their initial CELDT. Initially Fluent English Proficient students are not EL nor are they EO (Saunders & Marcelletti, 2013).

No Child Left Behind (NCLB)- A 2001 reauthorization of the Elementary and Secondary Education Act that brought standards-based educational reform and accountability systems to districts and schools nationwide (Kober & Center on Education Policy, 2010).

Primary language (L1) -The language spoken from birth or spoken the best (Krashen, 1982).

Reclassified Fluent English Proficient (RFEP) - Former EL students who meet district and state criteria for English proficiency (Saunders & Marcelletti, 2013).

SAT - A set of college-readiness achievement tests used for college admissions published by College Board (College Board, 2013b).

Second Language (L2) - Any language learned after the primary language (Krashen, 1982).

Structured English Immersion (SEI) - Mainstream English-only program for EL students in California. Proposition 227 established this program as the default for EL students (Allison, 2010).

Target Language - The language being learned (Krashen, 1982).

Transitional bilingual education (TBE) - A bilingual education program that uses primary language instruction to ease second language acquisition. The number one goal of a TBE program is English acquisition (Castillo & Sanders, 2013).

Two-Way Immersion (TWI) - A bilingual program that integrates native English speakers and native speakers of a minority language, uses both languages for instruction, and aims for high levels of bilingualism, biliteracy, and cultural proficiency (Bearse & de Jong, 2008).

University of California a-g Requirements (UC a-g) - Core curriculum required by the University of California (UC) and California State University (CSU) systems for eligibility for admissions (Boden, 2011). Students who meet these requirements with a grade of "C" or higher are deemed *college-ready* by the California university systems.

Significance

During the most recent economic recession, the nationwide job market illustrated the value of a college education. According to et al. (2012), job losses were concentrated among the less educated in the workforce. High school graduates were more than three

times as likely to lose their jobs as those with some college education or an associate's degree. Employment rates for college graduates actually increased during the recession (Carnevale et al, 2012).

In addition to the gap in graduation rates between Whites and Latinos among those students who graduate, there is also a gap in the UC a-g college readiness rates (Boden, 2011). The increasing Latino and EL student populations in the local, state, and nationwide settings (California Department of Education, 2012; Block, 2011a, 2011b; Boden, 2011) are at risk for under preparation for college and careers, and consequently, are more likely to suffer the financial life consequences of a lack of secondary education (Buysse et al., 2010; Cates, & Schaefle, 2011; Woolley et al., 2009; Yamamura et al., 2010). These financial effects of under-education, in addition to the hardship on individual families, also impact the national economy. According to Schneider and Yin (2011), college students who entered in 2002 but never graduated cost the country $3.8 billion in lost income and $730 million in taxes and the lack of a college degree costs one year's cohort of students close to $390 million per year in California alone. The completion of a college education has become central to the economic growth of American society (Chan, 2012).

Researchers have established that DL programs support increased academic achievement for EL students and children of poverty while nurturing bilingualism, biliteracy, and biculturalism (Collier, & Thomas, 2004; Genesee et al., 2005; Lindholm-Leary & Borsato, 2002; Lindholm-Leary & Hernández, 2011; Paciotto & Delany-Barmann, 2011). Lindholm-Leary (2002) and Borsato (2005) suggested that dual

language programs increase academic competence, motivation, and positive attitudes about college for all students. It is not clear, however, whether students from K-12 dual language programs demonstrate a higher rate of readiness for university pathways.

The expanding Latino and EL populations make it important for districts to create positive social change by implementing effective methods to foster their academic success and prepare all students for college and careers. If all students are entitled to equal opportunities, schools must better prepare minority groups for success after high school. Former Secretary of State Colin Powell argued that a high-quality education for all children is important key to establishing equity and creating positive social change, and stated:

> Every child deserves and must receive a quality education. Give a quality education to a child who believes in himself or herself and even with the bleakest beginning in life that child can make it and break the cycle of poverty and failure for that family forever. Education is the key to breaking that cycle of poverty and failure (Powell, 2000, p. 1).

Supporting the academic success of Latino and EL students to break the poverty cycle is of concern for educators and should be of importance for stakeholders and taxpayers. A changing, more technological and global economy requires students exit high school with the skills and knowledge necessary for college and the workplace (Lombardi et al., 2013).

Dual language programs may better prepare students for college and careers, end the cycle of poverty, and establish equity. This study is important as it addresses a gap in local practice by assessing the impact of DL on high school students, and addresses the

gap in the college readiness levels of high school students in a K-12 Spanish/English 90:10 elementary dual language program. By closing achievement gaps and raising college readiness levels for at-risk students, school districts can promote positive social change by increasing opportunities.

Guiding/Research Questions

In the local school district, there is a significant gap in the achievement of EL students and Latino students when compared to White students. There is also a gap in practices as the local district program evaluation plan does not examine college readiness with regard to language program options. A significant body of research substantiates the positive effects of DL programs on academic achievement for EL and EO students. There is a paucity of studies, however, related to the effects of DL programs on college readiness. The district does not currently evaluate the academic achievement and college readiness levels of DL high school students as a demographic group. The study addresses a gap in achievement, a gap in local practice, and a gap in the literature.

There are two central research questions for the study. First, when measuring college readiness, what differences are seen between IEL students in a DL program when compared to IEL students in English immersion? Second, how do students (over age 18), teachers, and parents describe their perceptions of the effects of a K-12 DL on student college readiness? The null (H_0) hypothesis is that there is no statistical significant difference between the college readiness level of DL and EI students. The alternate hypothesis is that there is a statistically significant difference between the college readiness levels of DL and EI students and that the impact of the DL program is positive.

In the next section I provide a review of the relevant literature that aligns with these research questions.

Review of the Literature

A thorough literature review was conducted to the level of saturation using the following terms: achievement gap, at-risk students, bilingual education, college readiness, dual language, dual immersion, English learner, language acquisition, Latino graduation rates, two-way immersion, and NCLB. I created an annotated bibliography using Zotero. For reference items from articles and books, I researched back to the primary articles and cited accordingly. The major themes researched include language acquisition theory, the history of bilingual education, DL programs, NCLB accountability in California, EL and Latino students at-risk, and the concept of college readiness.

Theoretical Framework

There are three major learning theories that guide the study; Stephen Krashen's Tenets of Second Language Acquisition (Krashen, 1982), Jim Cummins' Common Underlying Proficiency Model (Cummins, 1980), and Lev Vygotsky's Zone of Proximal Development (Vygotsky, 1978). Taken together, these classic language and learning theories form the framework supporting DL instruction.

Krashen's tenets of second language acquisition. Krashen articulates the five hypotheses that form the framework of his second language (L2) acquisition theory (Krashen, 1982). In his acquisition-learning hypothesis, Krashen defined the distinction between *learning language* and *acquiring* language. The hypothesis places emphasis on the acquisition of L2 through exposure to and practice in the target language. Krashen

explained the monitor hypothesis as the relationship between acquisition and learning and stated that acquisition creates productive language while learning serves as a *monitor* for editing language production. Krashen further asserted that the overuse of monitoring can inhibit language production and proficiency in L2. In Krashen's third hypothesis he suggested a native or *natural order* for the acquisition of grammar structures within a language. Specifically, that some grammar structures are acquired early while others are acquired much later, and that this order is predictable.

In Krashen's input hypothesis he claimed that L2 acquisition is most effective when instruction is one level above the student's current level of language proficiency. Finally, Krashen's identified *affective* or socioemotional factors that contribute to L2 acquisition including motivation, self-confidence and self-image, and anxiety in his affective filter hypothesis. Krashen asserted that positive affective factors facilitate the acquisition of L2 whereas negative affective factors can block acquisition. Lowering the negative affective filters increases language acquisition (1982).

Krashen further argued that L1 instruction is one of the most important features in an EL instructional program (1991). Instruction in L1 facilitates the acquisition of L2 by making input comprehensible, providing background knowledge, and enhancing the development of both basic and advanced literacy through cross-linguistic *language transfer* (Krashen, 1991). Taken together, Chomsky's and Krashen's theories of language acquisition provide a framework for L1 instruction.

Cummins' dual-iceberg analogy. Cummins' dual-iceberg analogy is also known as the linguistic interdependence hypothesis. Cummins (1980) stated that the common

underlying proficiency model shows that although languages have notable differences in both spoken and written form, all languages use the same central processing system and are interconnected. Cummins used the dual-iceberg analogy to demonstrate that the common underlying proficiency between languages creates the base of language acquisition. Cummins asserted that there are two dimensions to language acquisition, basic interpersonal communicative skills (BICS) and cognitive academic language proficiency skills (CALPS) (1980). Basic interpersonal communicative skills are the acquired conversational skills which are apparent as before the academic language skills are fully developed. Cummins further asserted that the deeper, more cognitively demanding functions of language, or CALPS, are formed below the surface and transfer across languages; the CALPS assertion is in alignment with Krashen's language transfer argument (1991).

Vygotsky's zone of proximal development. Vygotsky defined the zone of proximal development as "... the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." (1978, p.86). In his theory of the zone of proximal, Vygotsky suggested a target instructional range for what a child can do independently and with guidance and assistance (Vygotsky, 1978). This is in alignment with Krashen's input hypothesis. development (ZPD). Dual language programs emphasize targeted instruction at the language learner's ZPD level that builds on language proficiency (Alanís, 2013).

The classic works of Krashen (1991), Cummins(1980), and Vygotsky (1978) form the theoretical foundation for DL programs. These theories provide the basis for examining the effectiveness of language acquisition in DL and other bilingual programs. In the following section I explain how the current literature confirms this foundation and gives support for the application of these theories into program implementation.

Current Literature Review

Together, these language and learning theories provide a roadmap for DL instruction. Dual language programs support and develop both L1 and L2 to increase academic achievement in both languages. Dual language programs use the theories of language acquisition as the base for instructional practices that support language proficiency through exposure and practice in L2. Teachers in DL classrooms can capitalize on conditions that increase comprehensible input, limit the overuse of monitoring, lower the affective filter, and build on cross-linguistic transfer through targeted instruction in the ZPD. Language learning in the ZPD is guided by an adult or competent peer. Slavin (2008) suggested all teachers use information about levels of Vygotsky's ZPD to organize independent practice, cooperative learning, and scaffolding for direct instruction. In DL programs, cooperative learning between bilingual pairs encourages expertise in both languages and builds collaboration through social and linguistic interactions (Alanís, 2013).

The application of the theoretical framework of language acquisition to DL programs continues to be supported in current research including Alanís (2013); Castro,

Páez, Dickinson, and Frede (2011); Chomsky, (2005); de Jong (2013); del Carmen Salazar (2008); Ray (2009); Slavin (2008); and Soderman and Oshio (2008). This study adds to the literature by asking if a local DL setting has increased the academic achievements of EL students as evidenced by college readiness levels. Based on the literature and the theoretical framework, students in a DL program may demonstrate increased levels of college readiness as indicated by various quantitative academic measures despite the social and economic factors that put them at risk for underachievement and dropping out.

EL and Latino Students at Risk

A significant gap among groups of students with regard to preparation for entering college is established in the literature. English Learners and Latino students are graduating from high school at lower rates than their White classmates (Boden, 2011; Cates & Schaefle, 2011; Lindholm-Leary & Hernández, 2011). Although overall college enrollment and graduation rates increased for Latinos, the gap between Latinos and Whites has expanded (Boden, 2011; Buysse et al., 2010; Martinez et al., 2013). Dropout rates for Latinos have consistently been higher than that of Whites and Blacks since 1972 and the Latino dropout rate in California (31.7%) exceeds the national Latino dropout rate (18.3%) with a significant achievement gap (Boden, 2011; Chapman, et al., 2013).

Boden (2011), Lindholm-Leary and Block (2010), and Lindholm-Leary and Hernández (2011) documented that Latino students are at higher risk for academic underachievement and dropping out of school, as well as having lower college

acceptance and completion rates in part, due to EL status, low SES status, and academic under preparedness. According to Boden (2011) 36% of California's students graduated from high school UC a-g college-ready whereas 25% of Latino graduates met this readiness level in 2010. Latinos between the ages of 25 and 69 have a 12.4% graduation rate from 4-year universities compared with 37.1% of Whites (Boden, 2011). As Latino and EL student populations expand at the local, state, and national levels (California Department of Education, 2012; Block, 2011a, 2011b; Boden, 2011), it is the responsibility of educators to respond to their diverse needs and foster high academic achievement.

Bilingual Education

Historical Legislation and Case Law

Latinos have faced barriers to education, bilingual education notwithstanding, throughout California history. As children of immigrant or native working-class families, Latino children have historically left school to help provide for their families (Cates & Schaefle, 2011; Moll, 2010). Prior to the landmark *Mendez v. Westminster, 1946* California Supreme Court case, California schools had the right to deny admission to students of Mexican descent. Historians argue that *Mendez v. Westminster* rejected *separate but equal* and set the stage for *Brown vs. Board of Education, 1954* (Moll, 2010).

Federal, state, and case law in the 1960s and 1970s supported bilingual education in public schools. California Senate Bill 53 passed in 1967 ending a 95-year restriction that all instruction in California use English (Petrzela, 2010). The Bilingual Education

Act (California AB 2284) passed in 1972 and was the first to fund bilingual education in California. The Federal Equal Educational Opportunity Act (EEOA) of 1974 defined denial of equal educational opportunity to include the failure of districts to provide programs to help students overcome barriers including language (de Jong, 2011). The Title VII Bilingual Education Acts (BEA) of 1968 and 1974 provided school districts with supplemental funding to establish bilingual programs for EL students (Crawford, 2004; de Jong, 2011, 2013; Petrzela, 2010); these funds were earmarked for the development of curriculum, staff development, and parent involvement.

In 1974, the *Lau v. Nichols* United States Supreme Court decision affirmed the right for minority language students to receive quality English language development as a fundamental right of their educational program. The decision reaffirmed a lower California court ruling providing EL students with an equal opportunity to a quality education with adequate linguistic support and noted that same does not always mean equal (Allison, 2010; Callahan, Wilkinson, & Muller, 2010; de Jong, 2011, 2013).

As a result of *Lau*, the Office of Civil Rights developed the Lau Remedies that required districts to identify EL students by assessed language proficiency and provide appropriate support, provide notifications in the parents' home language, and to evaluate EL program effectiveness (Allison, 2010; de Jong, 2011). The requirement is the basis for California's CELDT exam (California Department of Education, 2013b). Under the Lau Remedies, districts found out of compliance were required to implement bilingual programs for elementary and middle levels. English Language Development programs were considered acceptable for high school students (de Jong, 2011, 2013).

Although California school districts received funding for bilingual education, they were not required to provide bilingual education until the Chacon-Moscone Bilingual-Bicultural Education Act in 1976 (AB 1329). The state legislation was in direct response to *Lau*. The rights provided by AB 1329 were strengthened in 1980 by AB 507 the Bilingual Education Improvement and Reform Act that required L1 instruction in the classroom (Jimenez-Castellanos, 2012).

Case law continued to confirm and enforce the educational rights of language minority students. In 1981, US Supreme Court case *Castaneda v. Pickard* provided the clearest definition of the requirements for EL programs. The court established a three-prong test to evaluate district EL programs*:* (a) the school must offer a research-based program, (b) the school must implement the program with fidelity and appropriate staffing and resources, and (c) the program results must be evaluated and program decisions made using results (Allison, 2010; de Jong 2011). In 1982, the court Supreme Court decision *Plyler v. Doe* echoed the spirit of EEOA, BEA and *Lau v. Nichols* by finding that the Fourteenth Amendment protects all children's right to a free public education including undocumented immigrant children (de Jong, 2011; Lopez, 2004).

In 1987, the legal mandate for bilingual education in California ended as AB 1329 was allowed to sunset (Jimenez-Castellanos, 2012). In 1997, California voters passed Proposition 227 which tightly restricted bilingual education programs and implemented an English-only or *structured English immersion* (SEI) approach to EL instruction (Allison, 2010; de Jong, 2011, 2013). The law also mandated that the use of minority languages be extremely limited and all instructional materials be in English (de Jong,

2011). The enactment of Proposition 227 caused the significant reduction of bilingual programs (Johnson, 2010). Its proponents argued that bilingual education hinders English acquisition and asserted the heavily refuted Separate Underlying Proficiency Model (Castillo & Sanders, 2013).

The No Child Left Behind Act of 2001 ended Title VII and supplemental funding for bilingual education. The current law included specific testing and monitoring requirements for EL students and sanctions against states that do not address the needs of ELs (de Jong, 2011, 2013). The law emphasizes English acquisition and achievement, and made no mention of bilingual education (Allison, 2010). Under NCLB, all states are accountable for ensuring that all students are proficient in English and mathematics by 2014. Schools are required to annually test all students in grades 3-8 and once in high school, disaggregate the data to measure achievement for all students, and provide parents of students in underperforming schools the right to tutoring or the choice to enroll in a different school (US Department of Education, 2001).

The No Child Left Behind Act requires EL students be placed in quality language educational programs based on scientific research that increase: (a) English proficiency, and (b) student academic achievement in the core academic subjects (US Department of Education, 2001). All EL students are required to be included in NCLB accountability testing. Regardless of when EL students began instruction in English, all EL students are required to be proficient in English by the 2014 mandate date. Failure to meet accountability targets triggers sanctions including the takeover of the school by the state (US Department of Education, 2001). The NCLB demands of accountability and high-

stakes emphasis on English proficiency contributed to the end of bilingual programs throughout the state and nation (Allison, 2010; de Jong, 2011, 2013; Harper, de Jong, & Platt, 2008; Ray, 2009; Smith & Rodriguez, 2011).

NCLB Accountability in California

The NCLB accountability system in California measures annual academic performance and growth on assessment results from students from grades 2-11 (California Department of Education, 2013c). The California system is centered on the Academic Performance Index (API). Each district, school, and all numerically significant student groups are assigned annual targets. The No Child Left Behind Act requires data to be disaggregated by student groups to help "address the achievement gaps that exist between traditionally higher- and lower-scoring student groups" (California department of Education, 2013c, p. 1). The API does not track individual student data across years but compares school and district level data on an annual basis.

The API is a number ranging from a low of 200 to a high of 1000 (California Department of Education, 2013c). The 2013 target API score used for NCLB accountability is 800 (California Department of Education, 2013c). API points are calculated from the converting student's performance on various content assessments. The points are averaged for all students and all tests. The result of the calculation is the API score (California Department of Education, 2013c).

A review of a local district's API data indicated that the 2013 API for all district students combined is 809; however, the achievement gap is evidenced by more important disaggregated API scores: Whites 866, Latinos 746, socioeconomically disadvantaged

741, and EL 682 (California Department of Education, 2013). Given the student populations in the district (47% Latino, 60% free and reduced lunch, 22% EL) more than half of the districts' students are not achieving at the target NCLB performance level (California Department of Education, 2013); these gaps are persistent over more than 10 years of API data (California Department of Education, 2013).

A Dual Language Program Perspective

Structured English Immersion, Transitional Bilingual Education (TBE), and DL programs are all designed with the goal of supporting EL students in attaining proficiency in English (Castillo & Sanders, 2013; de Jong, 2013; Morren López, 2012). They are, however, based on different ideologies. Programs that build upon and develop L1 are considered additive (Ray, 2009). Dual-language programs including both the 90:10 and 50:50 models are additive (Alanis & Rodriguez, 2008; Castillo & Sanders, 2013; Paciotto & Delany-Barmann, 2011; Ray, 2009). Some language programs are considered subtractive and ignore or discourage the development of L1. Structured English Immersion and TBE programs are subtractive. Even though L1 is used in TBE, it is used only as a means of improving L2 (de Jong, 2013). In SEI and TBE programs, the goal is to move EL students into English-only classes as soon as possible without maintaining L1 (Alanis & Rodriguez, 2008; Castillo & Sanders, 2013; Paciotto & Delany-Barmann).

Advocates for SEI and TBE programs argue that L1 instruction interferes with L2 acquisition. The assumption made by these proponents, called the Separate Underlying Proficiency Model, is that the language space in the brain is limited and development of L1 will permanently inhibit acquisition of L2 (Castillo & Sanders, 2013). There is a

paucity of literature to support the theory. The assumption has been refuted by language researchers including Cummins (1991), Krashen (1982, 1991), Genesee et al (2005), and Thomas and Collier (1997). Most arguments against L2 instruction stem from a monolinguistic sociopolitical platform and are not founded in language or cognitive theory (de Jong, 2013; Johnson, 2010; Paciotto & Delany-Barmann, 2011). Other arguments against DL programs include the caution against "watering down" minority language instruction in order to meet the need of majority language learners at the detriment of EL students (Valdés, 2011).

In the literature, DL programs are also known as dual immersion with variations including two-way and one-way immersion (Ballinger & Lyster, 2011; de Jong, 2013; Pimentel, 2011). All of these additive programs promote high levels of proficiency in both L1 and L2 for both EL and EO students (Castillo & Sanders, 2013; Lindholm-Leary, 2012; Morren López, 2012). DL programs integrate primary English speakers (language majority students) and EL students (language minority students) in the same classroom with the goals of promoting bilingualism and biliteracy, high-level academic achievement, and cultural proficiency (Ballinger & Lyster, 2011; Castillo & Sanders, 2013; Pimentel, 2011). Dual language programs provide content instruction in both English and in the L1 of the EL students and are designed to provide quality, rigorous academic instruction for both language minority and language majority students (Castro et. al., 2011; Lindholm-Leary, 2012).

The Concept of College Readiness

The concept of college readiness is still evolving and being standardized (Martinez et al., 2013). ACT defines college ready as the attainment of skills needed to be successful credit-bearing first-year courses at a postsecondary institution without remediation (ACT, 2012). According to Lombardi et al. (2013), there are four keys to college readiness: key cognitive strategies, key content knowledge, key learning skills and techniques, and key transition knowledge and skills. These four keys form the anchors and underpinning for the Common Core State Standards (CCSS) (Lombardi, et al., 2013). The CCSS policy initiative was designed to increase preparation for college and careers and the opportunities associated with the attainment of these skills (Lombardi et al., 2013) although opponents argue for curriculum designed to meet local needs (Yong Zhao, 2012).

According to Boboc and Nordgren (2013), most high school graduates have not attained the skills necessary for college and the workplace. Given the high percentage of EL and Latino students dropping out of high school, the low percentage of Latino students graduating UC a-g ready, and the low university completion rate for Latinos documented in the literature, there is a clear need for schools to respond to diverse student needs and to prepare graduates for the demands of life after high school. The literature establishes that DL programs support increased academic achievement for at-risk EL, Latino, and children of poverty while cultivating bilingual, biliterate, and bicultural students. Furthermore, Lindholm-Leary and Borsato (2002, 2005) suggest that dual language programs increase academic competence, motivation, and positive

attitudes about college for all students. There is a lack of studies, however, related to the effects of DL programs on college readiness. The purpose of the study is to determine what effects, if any, DL language programs have on raising the college readiness levels of Latino and EL students, as their academic success and preparation toward college readiness is of great concern to educators in the local, state, and national setting.

There is an achievement gap between White students and Latino students in the area of college readiness in the local setting (California Department of Education, 2012), the state of California, (Boden, 2011; Finkelstein & Fong, 2008), and the nation (Cates & Schaefle, 2011). According to ACT (2012), college readiness is "the acquisition of the knowledge and skills a student needs to enroll and succeed in credit-bearing first-year courses at a postsecondary institution (such as a two- or four-year college, trade school, or technical school) without the need for remediation" (p. 1).

More specifically, both the UC and the CSU systems use the same measure of college readiness. The UC and CSU systems require high school students to complete seven strands (labeled a-g) of prescribed college preparatory coursework called UC requirements a-g (UC a-g) before applying to college. The seven requirements include four years of English, three years of mathematics, two years each of social studies, laboratory sciences, and foreign language as well as one year of a visual/performing art and a single elective (Boden, 2011). Completion of the coursework with a "C" or higher makes a student eligible to apply for admission to both the CSU and UC systems. Students who meet these requirements are deemed "UC/CSU ready" and are considered *college-ready*.

Implications

The study informs local school practices, help develop policies to offer the most effective programs for EL and Latino students, and identify which language program better prepares students for the challenges of college and careers. The study adds to the body of research on both the effects of DL education and programs which may increase college readiness. As a program evaluation, the implications of the study could support the expansion of successful programs to help meet the needs of Latino and EL students. A white paper was prepared to present to district stakeholders (Appendix A).

Further studies could include evaluating the use of various K-8 teaching strategies designed to promote language acquisition to measure their effectiveness in DL high school classrooms. Additionally, the role of AVID (Advancement via Individual Determination) college preparation programs in combination with DL could be examined to see what, if any, effects the combination of these programs has on preparing students who are college and career ready. Given the growing Latino and EL student populations it is important for school districts to evaluate their practices and create positive social change by implementing effective programs to prepare students for the increasing demands of universities and the workplace.

Summary

In Section 1 I discussed the problematic and significant achievement gap that exists between Latino, EL, and White students in the local, state, and national settings. The gaps have become more of a focal point under NCLB accountability and in light of research showing the need for all students to graduate college and career ready. The

school district that was studied provides students with either a TBE or DL program. Dual language programs were proposed as a possible solution to the inequity of college preparation between the various demographic groups. I also described various bilingual education models in the United States including DL and TBE and the theoretical framework that support their practices.

In Section 2 I explain how both language models were evaluated for their effects on college readiness levels. I also describe the research methods, design, and data collection, and provide the details of the proposed data analysis and validation methods. I include a description of the protections of participants' rights and explain the evaluation scope and limitations. Finally, I describe the program evaluation including the rationale, a literature review, and the implications of the program evaluation.

Section 2: The Methodology

Introduction

In Section 1 I addressed the rationale for assessing the effects of Dual Language (DL) programs on college readiness levels and justified the need to collect data to evaluate the DL program in a medium-sized Title 1 suburban school district in California. The purpose of the project is to inform all district stakeholders of the levels of college readiness so that district and school leaders may begin the process of improving and/or expanding the DL program to meet the needs of at-risk students, improve student achievement, and increase the number of students prepared for success in college and careers. In this section I focus on the mixed method design and approach, program evaluation description and limitations, setting and sample, context for data collection and analysis, and protection of participants.

Mixed Method Research Design and Approach

A sequential, explanatory, mixed methods program evaluation study with quantitative data collection and analysis followed up with qualitative data from interviews was used for the study. According to Creswell (2012), a mixed methods approach to a study is appropriate when the answer to the central question or hypothesis can best be answered by the combination of complementary quantitative and qualitative data. Mixed methods research is the best fit when the researcher seeks to understand both the "what" and the "why or how." The goals of the study are two-fold: 1) to compare the college readiness levels (as measured by GPA, ACT/SAT scores, completion of coursework towards UC a-g requirements, and participation in AP coursework) of

students in a DL program against students in an English Immersion (EI) program, and 2) evaluate students' (over 18 years old), teachers,' and parents' perceptions of the effects of the students' language programs on college readiness; therefore, a mixed methods study is appropriately aligned to the research questions.

I first collected quantitative data to determine any statistical differences between the academic achievement and college readiness indicators for the DL and English Immersion groups. The emerging data provided the framework for the development of interview questions that were sufficient to gather complementary qualitative data. A mixed methods explanatory sequential or two-phase design was an appropriate choice for the study because the empirical data first provided the assessment results for student achievement and college readiness. Next, the qualitative data obtained from the interviews provided more personal and detailed data, extended the findings, and helped in the interpretation and explanation of the quantitative results. The study design is appropriate and in alignment with Creswell's (2012) description of sequential explanatory mixed methods design because the qualitative interview was designed based on the quantitative results and helped support and explain the quantitative findings. The quantitative transcript data provided the general picture of the problem and the qualitative interview data helped refine and explain the general picture (Creswell, 2012).

Program Evaluation Description

A formal program evaluation is warranted to determine the college readiness levels of students in the DL program in comparison with students in the EI program and to provide the school, district, and all stakeholders measures of the academic achievement

of DL students. According to Kiely (2009) "program evaluation is a form of enquiry which describes the achievements of a given programme, provides explanations for these, and sets out ways in which further development might be realized" (p. 63). The best results of a program evaluation study are obtained by using varied methods to gather data from a variety of sources. The results become more valid with both depth and variation of data (Kiely, 2009; Zohrabi, 2011). The project study includes quantitative and qualitative data collected from a variety of sources including selected archival data as well as interview responses. The final product for the project study is a formative program evaluation with the presentation of a white paper that includes recommendations for future practices.

A formative evaluation allows the stakeholders to see the program's areas of strengths and needed improvement while evaluating program data as a whole (Lodico, Spaulding & Voegtle, 2010). The goal of the formative program evaluation study is multifold: (a) to assess the academic achievement results and college-readiness indicators of program participants, (b) to provide areas for program improvement and expansion, and (c)to provide information for decisions regarding the program. Formative program evaluation as described by Lodico et al., (2010) was appropriate because the high school DL program has not yet been evaluated and the goal is to improve the program based on data collected.

Setting and Sample

The DL program is centered at one of the district's two comprehensive high schools. There was no "official" DL high school, however, when the first DL cohort (the 2013 graduating class) entered high school the designation came when these students were sophomores. Data from DL students at schools other than the official DL high school were excluded, which resulted in a small sample frame of DL participants for both the quantitative and qualitative stages of the study (*n* = 11 DL, 11 EI (5 IEL, 5 EO, 1 IFEP for matched groups)), *n* = 2 DL students (EO), 1 DL parent, 5 DL/EI staff for qualitative study).

I collected data from the quantitative portion of the study from complete transcripts of high school graduates from 2013 and 2014 for the experimental (DL) and control (EI) instructional programs as well as non-English Learner (EL), non-DL students for reference. To be considered an eligible transcript for inclusion in the study, enrollment in the various language programs must have been continuous since 1st grade. For deeper inquiry all transcripts of DL students in the 2013 and 2014 classes were analyzed as appropriate with purposive criterion or complete collection sampling. The number of students in the DL and matched cohorts was small and warrants the complete collection technique. According to Teddlie and Yu (2007), it is appropriate to use purposive complete collection to select all the members of a population who meet a certain criterion. In this case, the criteria are all DL in the class of 2013 or 2014 who were enrolled in the DL program since first grade.

Because the backgrounds of IEL students in the school are diverse and imbalanced, random sampling could result in the exclusion of a small demographic group. Although these results may not be statistically significant if the population is too small, the demographic groups should be included in proportion to their percentage of the study population (Creswell, 2012). The use of stratified probability sampling for this group is appropriate to ensure that all stratums desired in the sample are proportionate to the existing population (Creswell, 2012). Research participants for the qualitative interview portion of the study included a homogenous DL sample composed of 2013 (over 18), as well as teachers and parents from the DL programs from the same time frame. Homogeneous sampling is appropriate in this case as all of the participants in the group (over age 18) meet the same criteria- participation in the DL classes of 2013 and 2014. The EI sample was a matched, stratified probability sample to maintain a representative population.

Context and Strategies for Data Collection

Quantitative Transcript Data

In addition to analyzing public accountability student achievement data, I used purposeful complete collection, or criterion, sampling techniques to collect DL student transcripts for analysis in the study. I used stratified probability sampling to select EI transcripts. The National Assessment of Educational Progress uses student coursework, demographic, and achievement transcript data to analyze high school course-taking patterns and for predicting educational outcomes (National Center for Education

Statistics, 2014). The use of student transcript data for the study is an appropriate way to assess individual student data in a manner that is accurate, confidential, and nonintrusive.

The data I collected from transcript analysis included GPA, ACT/SAT scores (when applicable), completion of coursework towards UC a-g requirements, and participation in AP coursework. I collected transcript data from records stored at the school and at the district office. Transcripts are permanent student records, legal documents, and recorded and secured by the school registrar or district records clerks. The transcript data I collected included course history and marks by semester, GPA by semester, and AP/SAT/ACT scores if the student chose to release those to the school. The transcript data I analyzed for the study included grade point average, course history and marks including AP coursework, and test scores including AP and ACT/SAT scores. I coded the transcript data to protect anonymity and confidentiality and I accepted the data from the district as accurate.

I disaggregated and analyzed the data by demographic groups including instructional setting, socioeconomic status, years in US instruction, and home language. The information, although not listed on transcripts, was available in the district student information system. Specifically, 11th and 12th grade transcripts for all students who were enrolled in the DL program from 1st grade forward were compared with a matched control group of students with similar demographic backgrounds who were enrolled in the EI program during the same time frame. The results were compared to non-EL, non-DL students as a reference. Demographic groups to be examined include ethnicity,

socioeconomic status, and English language proficiency status when entering/graduating from the program, and parent education levels.

Quantitative data collected includes GPA, completion of UC a-g coursework requirements, AP coursework completion, and ACT/SAT scores. The null (H_0) hypothesis is that there is no statistical significant difference between the college readiness level of DL and EI students. The alternate hypothesis is that there is a statistically significant difference between the college readiness levels of DL and EI students and that the impact of the DL program is positive. The independent variable was the program implemented (with levels constituting categorical data of DL or EI program, language classification, SES level, and ethnicity) and the dependent variables were the continuous academic and college-readiness data including: GPA analysis, number of UC a-g courses completed, number of AP courses completed, and AP and ACT/SAT score analysis. The raw data from the transcript study is available from the researcher upon request. Analysis of the raw data is presented in tables in the next section.

Qualitative interview data collection

I collected additional data from interviews of stakeholders including DL students from the graduating classes of 2013 (over 18), teachers, and a parent of a DL student. In alignment with the sequential explanatory research approach, a confirming/disconfirming individual interview approach was appropriate to explain and confirm specific findings (Teddlie & Yu, 2007). The interview questions were strategically developed to gather more personal qualitative data to probe the findings that arose from analysis of the quantitative data. The purpose of the interviews was to further explain and extend the

quantitative findings. Interviews took place at the school and lasted about 15 minutes. Students did not miss any instructional time to participate in the project study.

To gain access to the student participants, I secured school permission to meet with DL students over 18 during summer at the school. I posted a Facebook message to the social group already created by the 2013 DL cohort and sent a letter inviting potential participants to a meeting to explain the study. Students, teachers, and parents were invited (via U.S. mail) to separate meetings. A district administrator was present at the beginning of the meetings to welcome the group and encourage participation as part of the goal of improving the program. She then exited and I ran the meeting. These meetings helped establish a researcher-participant working relationship by explaining the goals of the study, my role as the researcher, the interview protocols, and the participants' rights.

Role of the Researcher

I conducted the study while employed in the same school district as the DL high school. I am currently the site principal at a DL elementary school in the district. In my previous professional roles I was an assistant principal at the DL middle school for one year when the student participants were in 7^{th} and 8^{th} grade and I was also the assistant principal of curriculum and instruction at a comprehensive high school in the district. I, therefore, knew some of the student, parent, and teacher participants as a result of these professional roles. My experiences did not affect the collection of the quantitative transcript data; however, the experiences may have affected interview data collection because participants may have felt more or less comfortable with me than with a random

researcher. The participants may also have been aware of my bias towards supporting DL programs. I kept this bias in mind and as I collected and analyzed data, developed interview questions, disseminated the results, and made recommendations in the program evaluation. My bias is, specifically, towards ensuring the success of the DL program; this makes the communication of an honest project study important to move the program forward.

Data Analysis and Validation

By design, a mixed methods study uses a variety of data which increases study validity (Zohrabi, 2011). The varied data in the study include categorical and continuous data as well as empirical quantitative and subjective qualitative data; thus, the various types of data and the quantity of data collected were sufficient to address the research questions. The quantitative analysis was integrated into the qualitative component as the transcript study analysis was used to develop questions for the qualitative interview data collection. The results of the qualitative approach were integrated with the quantitative approach to create the study findings. Specifically, quotes from the interview transcripts were used to support, explain, confirm or disconfirm the quantitative findings. In addition, the themes and quotes were also integrated with the transcript findings to make specific program recommendations.

I entered all transcript data into SPSS ™ for statistical analysis. SPSS ™ is a software system for data analysis that can be used for descriptive statistics, analysis of means, and the creation of tables and charts from data (Creswell, 2012). The mean, median, mode, standard deviation, *t*-test and corresponding *p*-value for statistical

significance were calculated for: GPA, number of UC a-g courses completed, number of AP courses completed, number of AP tests taken, and AP and ACT/SAT scores (if applicable) for each demographic and language program group. I analyzed the data for trends and findings that could be further explained by the qualitative data collected.

To triangulate the quantitative transcript data and follow-up the analysis, I collected qualitative data from individual interviews of students, staff, and parents. . The audiotapes from the interviews were transcribed for detailed analysis. I conducted a preliminary exploratory analysis to gain an understanding of the data as a whole (Creswell, 2012, p. 243). The interview transcripts and field notes were coded using axial coding to identify common themes. The transcripts were compared to and explored with the field notes. Next, I separated the data into segments until thematic codes were clear due to redundancy. The thematic were then collapsed into broader themes (Creswell, 2012). Triangulation of the quantitative transcript data with students (over 18), parent, and staff interviews and participant member checks were used to increase validity (Creswell, J., 2012).

Protection of Participants' Rights

I took various measures to protect the rights of the study participants (all over 18). In all research studies, the protection of participants' rights is crucial to maintain ethical integrity. I obtained permission to collect data from Walden University's Institutional Review Board (IRB approval #06-20-14-0301799), the district superintendent, and the principal. I conducted the study in accordance with all school district policies. I provided a cover letter and consent form to participants at the time of data collection to explain all

participants' rights including voluntary participation, the limited risk of confidential information, the right to ask questions of the study at any time, and the right to withdraw at the study at any point.

I protected the identity for interview participants with the following procedures: interview transcripts were prepared with identifying names and other information redacted, and interviews were conducted in a reserved room with the door closed and labeled with a "Do Not Disturb" sign. I maintained all electronic data in password protected devices. I stored all paper data in a locked file cabinet in my home. Data will be securely maintained for five years and then destroyed.

Limitations of the Program Evaluation

The program evaluation is limited in that it is a formative evaluation so the results are only valid with the cohorts of students studied (classes of 2013 and 2014) in one specific DL program. The limited formative results, though helpful for program evaluation and improvement, are not valid for extrapolation to larger populations. As with any evaluation, the program evaluation is also limited to identifying strengths and weaknesses and proposing recommendations for improved practices. An evaluation is not an "answer" and is only one tool in the improvement process cycle (Worthen, Sanders, & Fitzpatrick, 1997). The DL program is a 13-year experience, which limits the program evaluation as various factors over the extended period of time may have contributed to the college readiness of these DL cohorts that may not have affected later DL cohorts.

The low cohort numbers further limited the study. Although there were more DL students in the graduating classes of 2013 and 2014, there were only 11 that met all of the

criteria. The most limiting factors were continuous enrollment in the DL program since first grade. There was one DL student who met all the criteria but whose data I did not include in the study; the student was a special education student who graduated in a fifth year program. I did not include the student's data as no fitting "match" could be found in the EI group transcript/demographic data.

The small group of DL students led to a small pool of interview participants. The intent of the interviews was to confirm/disconfirm initial qualitative findings. Although this was accomplished for the DL EO cohort, there were neither IEL DL nor IEL EI students nor parents that participated in the interviews, which skewed the data and further limited the findings.

Data Analysis Results

I chose a sequential explanatory, mixed methods approach to the study because the answers to the research questions were best answered by the combination of complementary quantitative and qualitative data (Creswell, 2012). The two-phase design was an appropriate choice for the study because the empirical transcript data first provided the assessment results for student achievement and college readiness. I conducted qualitative interviews to explore causes for the differences in the quantitative data.

For the quantitative portion of the study, I used descriptive statistics and analysis of means to examine the transcript data gathered to help answer the first research question: when measuring college readiness, what differences are seen between IEL students in a DL program when compared to IEL students in English immersion?

Transcript data included grade point average (GPA), ACT/SAT scores, completion of coursework towards UC a-g requirements, and participation in Advanced Placement (AP) coursework and test participation. The null (H_0) hypothesis that there was no statistical significant difference between the college readiness level of DL and EI students was true with regard to GPA, ACT/SAT participation and scores, and completion of coursework towards U-C a-g requirements. The alternate hypothesis that there was a statistically significant difference between the college readiness levels of DL and EI students and that the impact of the DL program is positive; however, was true with regard to the number of AP courses passed and number of AP tests taken.

The qualitative interview of students, teachers, and a parent answered the second research question: how do students (over age 18), teachers, and parents describe their perceptions of the effects of a K-12 DL on student college readiness? I conducted a preliminary exploratory analysis of interview transcripts to gain an understanding of the data as a whole (Creswell, 2012, p. 243). I then used axial coding to find common themes. Students, teachers, and the parent expressed that the DL program had positive impacts on preparing students for college.

Quantitative Findings

Table 1 contains the demographics of the DL participants (and their EI matched participants) in the study. Variables include graduating class, ethnicity, language status, free/reduced lunch status, gifted and talented education (GATE) identification status, and parent education levels. The percentages of the school's combined 2013 and 2014

graduating classes with students demonstrating continuous enrollment since first grade are included for comparison.

Table 1

Demographic Data of Dual Language (DL) and Their Matched English Immersion (EI) Participants in Comparison with School Population

Variables	Levels	*n*	% of Participants	% of School '13 and '14
Graduating Class	2013	6	55	52
	2014	5	45	48
Ethnicity	Latino	7	64	49
	White	4	36	45
	Other	0	0	6
Language Status	English Only	5	45	65
	English Learner	0	0	3
	RFEP	5	45	28
	IFEP	1	10	3
	IEL (EL + RFEP)	5	45	31
Free/Reduced Lunch Status	Qualifies Free/Reduced Lunch	7	64	41
	Does Not Qualify	4	36	59
Gifted and Talented Status	Qualifies for GATE	2	18	26
	Does Not Qualify	9	82	74
Parent Education Levels	Not a High School Graduate	2	18	23
	High School Graduate	2	18	14
	Some College	0	0	23
	College Graduate	4	36	22
	Post Graduate	3	27	18
	Declined to State	0	0	1

The demographics of the DL cohorts of 2013 and 2014 showed that the DL cohort had more at-risk factors when compared to the non DL cohorts of the same years. The DL cohort had more Latino students, (64 % versus 49%), less English only students (55% versus 65%), more students of poverty (64% versus 41%) and less GATE identified students (18% versus 26 %). With regard to parent reported lower levels of formal

education, both the DL and non DL cohorts were the same with 63% reporting “some College” or high levels of education (Table 1).

The descriptive statistics comparing the college readiness indicators for the DL IEL compared to the EI IEL students are contained in Table 2, which includes sample size, means, standard deviations, and standard errors of the means, and are included for both the DL and EI groups. Variables that were considered include GPA, number of UC a-g courses passed with a grade of “C” or higher, AP course participation, number of AP courses passed, number of AP courses passed other than Spanish courses, number of AP tests attempted, number of AP tests passed, SAT participation, SAT combined score, ACT participation, and ACT combined score. Although not statistically different for most variables, the mean of the DL group was higher than the mean of the EI group for all variables measured except the ACT combined score. The DL means for AP courses passed with a “C” or higher, and AP tests taken were statistically significant from the EI group.

Table 2

Dual Language Initial English Learner (DL IEL) Compared to English Immersion Initial English Learner (EI IEL)

College Readiness Variable	Language Program	*n*	*M*	*SD*	*SEM*
GPA	DL	5	3.25	0.46	0.21
	EI	5	2.49	0.93	0.42
UC a-g courses	DL	5	30.80	4.15	1.85
	EI	5	21.20	15.06	6.73
AP Participation	DL	5	0.80	0.45	0.20
	EI	5	0.20	0.45	0.20
Total AP courses	DL	5	1.20	0.84	0.37
	EI	5	0.20	0.45	0.20
Non-Spanish AP	DL	5	0.20	0.45	0.20
	EI	5	0.00	0.00	0.00
Total AP Tests	DL	5	1.00	0.71	0.32
	EI	5	0.00	0.00	0.00
AP Tests Passed	DL	5	0.20	0.45	0.20
	EI	5	0.00	0.00	0.00
SAT Participation	DL	5	0.60	0.55	0.24
	EI	5	0.40	0.55	0.24
SAT Score	DL	5	656.00	603.89	270.07
	EI	5	576.00	795.82	355.90
ACT Participation	DL	5	0.60	0.55	0.24
	EI	5	0.20	0.45	0.20
ACT Score	DL	3	15.00	1.732	1.00
	EI	1	19.00	.	.

I used a *t*-test to compare the means of the two groups for all of the above variables. The use of the *t*-test for the study required several assumptions: that the population distributions are normal, that the treatment conditions are independent, and that the population distributions have the same variances (Creswell, 2012). To test the assumptions the researcher used the SPSS ™ Levene's Test for Equality of Variances to test these assumptions. The results are displayed in Table 3. Table 3 lists the *F* and *p*

values, *t*-value, degrees of freedom, the significance level of *t*-test (Sig. 2-tailed), mean difference, the standard error of the difference, and the confidence intervals for the differences between the group means with lower and upper confidence intervals.

Table 3

Statistical Analysis of IEL DL vs. IEL EI College Readiness Variables

		Levene's Test for Equality of Variances		*t*-test for Equality of Means					
		F	*p*	*t*	Df	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
GPA	Equal variances Assumed	2.41	0.16	1.63	8.00	0.14	0.76	0.47	[-0.31, 1.83]
	Equal variances not assumed			1.63	5.85	0.16	0.76	0.47	[-0.39, 1.91]
UC a-g courses	Equal variances Assumed	9.39	0.02	1.38	8.00	0.21	9.60	6.98	[-6.51, 25.71]
	Equal variances not assumed			1.38	4.60	0.23	9.60	6.98	[-8.83, 28.02]
AP	Equal variances Assumed	0.00	1.00	2.12	8.00	0.07	0.60	0.28	[-0.05, 1.25]
	Equal variances not assumed			2.12	8.00	0.07	0.60	0.28	[-0.05, 1.25]
Total * AP Courses	Equal variances Assumed	0.97	0.20	2.36	8.00	0.04	1.00	0.42	[0.02, 1.98]
	Equal variances not assumed			2.36	6.11	0.06	1.00	0.42	-0.03, 2.03]
Non Spanish AP	Equal variances Assumed	7.11	0.03	1.00	8.00	0.35	0.20	0.20	[-0.26, 0.66]
	Equal variances not assumed			1.00	4.00	0.37	0.20	0.20	[-0.36, 0.76]
AP* Tests	Equal variances assumed	2.67	0.14	3.16	8.00	0.01	1.00	0.32	[-0.27, 1.73]
	Equal variances not assumed			3.16	4.00	0.03	1.00	0.32	[0.12, 1.88]
AP Tests Passed	Equal variances Assumed	7.11	0.03	1.00	8.00	0.35	0.20	0.20	[-0.26, 0.66]
	Equal variances not assumed			1.00	4.00	0.37	0.20	0.20	[0.36, 0.76]
SAT	Equal variances Assumed	0.00	1.00	0.58	8.00	0.58	0.20	0.35	[-0.60, 1.0]
	Equal variances not assumed			0.58	8.00	0.58	0.20	0.35	[-0.60, 1.0]
SAT Score	Equal variances Assumed	2.45	0.16	0.18	8.0	0.86	80.00	446.77	[-950.25, 1110.25]
	Equal variances not assumed			0.18	7.46	0.86	80.00	446.77	[-963.39, 1123.39]
ACT	Equal variances Assumed	1.52	0.25	1.27	8.00	0.24	0.40	0.32	[-0.33, 1.13]
	Equal variances not assumed			1.27	7.69	0.24	0.40	0.32	[-0.33, 1.13]
ACT Score	Equal variances assumed			-2.00	2.00	0.18	-4.00	2.00	[-12.61, 4.61]
	Equal variances not assumed						-4.00		

Note. CI = confidence interval *Denotes statistical significance at $p < .05$

The IEL DL students passed statistically more AP courses (M = 1.2, SD = 0.84) than the IEL students who participated in the EI program (M = 1.0, SD = 0.71) t (8) =.2.36, $p < .05$. Also, the IEL DL students took more AP exams (M = 1.2, SD = 0.84) than the IEL EI students (M = 0.2, SD = 0.45) t (8.0) =3.16, $p < .05$. There were no other statistically significant differences in the means of the other variables.

Table 4 and 5 contain the descriptive and t-test statistics, respectively, comparing Latino DL participants (n = 7) with Latino EI participants (n = 7). The mean of the Latino DL group is higher than the mean of the Latino EI group for all variables measured except the ACT combined score. Latino DL students were statistically more likely to take an AP course (M = 0.86, SD = 0.38) t (12) =2.45, $p < .05$ and took more AP tests (M = 1.14, SD = 1.07) t (12) =2.33, $p < .05$ than the EI Latino participants.

Table 4

Descriptive Statistics of DL Latino Students Compared to EI Latino Students

College Readiness Variable	Language Program	*n*	*M*	*SD*	*SEM*
GPA	DL	7	3.13	0.70	0.27
	EI	7	2.60	0.78	0.30
UC a-g Courses	DL	7	30.57	6.70	0.53
	EI	7	20.29	16.17	6.11
AP Participation	DL	7	0.86	0.38	0.14
	EI	7	0.29	0.49	0.18
Total AP Courses	DL	7	2.00	2.31	0.87
	EI	7	0.43	0.79	0.30
Non-Spanish AP	DL	7	0.29	0.49	0.18
	EI	7	0.14	0.38	0.14
Total AP Tests	DL	7	1.14	1.07	0.40
	EI	7	0.14	0.38	0.14
AP Tests Passed	DL	7	0.42	0.79	0.30
	EI	6	0.17	0.41	0.17
SAT Participation	DL	7	0.57	0.53	0.20
	EI	7	0.43	0.53	0.20
SAT Score	DL	7	700.00	683.72	258.42
	EI	7	598.57	752.80	284.53
ACT Participation	DL	3	0.43	0.53	0.20
	EI	1	0.14	0.38	0.14
ACT Combined Score	DL	3	15.00	1.73	1.00
	EI	1	19.00		

Table 5

Statistical Analysis of Latino DL vs. Latino EI College Readiness Variables

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	*P*	*t*	df	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
AP*	Equal variances assumed	1.60	0.23	2.45	12.00	0.01	0.57	0.33	[0.06, 1.08]
	Equal variances not assumed			2.45	11.29	0.03	0.57	0.23	[0.06, 1.08]
AP test*	Equal variances assumed	3.83	0.07	2.33	12.00	0.04	1.00	0.43	[0.07, 1.93]
	Equal variances not assumed			2.33	7.48	0.05	1.00	0.43	[0.00, 2.00]

Note. CI = confidence interval. *Denotes statistical significance at $p < .05$

Table 6 (descriptive) and 7 (*t*-test) contain the differences between the EO and IEL DL students. There are no statistically significant differences between the groups. The EO group has higher means with AP participation, number of AP courses passed, number of non-Spanish AP courses passed, number of AP tests, and ACT combined score. The IEL group has higher means for GPA, UC a-g courses passed, SAT score and SAT participation, ACT participation.

Table 6

Descriptive Statistics EO DL Compared to IEL DL students

College Readiness Variable	Language Program	*n*	*M*	*SD*	*SEM*
GPA	EO	6	3.31	0.87	0.36
	IEL	5	3.25	0.46	0.21
UC a-g	EO	6	30.33	8.71	3.56
	IEL	5	30.80	4.15	1.85
AP Participation	EO	6	1.00	0.00	0.00
	IEL	5	0.80	0.45	0.20
AP Courses	EO	6	3.83	2.64	1.08
	IEL	5	1.20	0.84	0.37
Non Spanish AP	EO	6	0.67	0.52	0.21
	IEL	5	0.20	0.45	0.20
AP Tests	EO	6	1.50	1.22	0.50
	IEL	5	1.00	0.71	0.32
AP Tests Passed	EO	6	1.00	1.26	0.52
	IEL	5	0.20	0.45	0.20
SAT Participation	EO	6	0.33	0.52	0.22
	IEL	5	0.60	0.55	0.25
SAT score	EO	6	685.00	910.29	371.63
	IEL	5	656.00	603.89	270.07
ACT Participation	EO	6	0.33	0.52	0.21
	IEL	5	0.60	0.55	0.25
ACT Score	EO	2	20.50	3.54	2.50
	IEL	3	15.00	1.73	1.00

Table 7

Statistical Analysis of EO DL Compared to IEL DL students

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	*p.*	*t*	*Df*	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
GPA	Equal variances assumed	3.05	0.12	0.14	9.00	0.89	0.06	0.44	[-0.93, 1.05]
	Equal variances not assumed			0.15	7.81	0.89	0.06	0.41	[-0.89, 1.02]
UC a-g courses	Equal variances assumed	3.57	0.09	-0.11	9.00	0.92	-0.47	4.27	[-10.13, 9.20]
	Equal variances not assumed			-0.12	7.41	0.91	-0.47	4.01	[-9.85, 8.91]
AP	Equal variances Assumed	8.73	0.02	1.11	9.00	0.30	0.20	0.18	[-0.21, 0.61]
	Equal variances not assumed			1.00	4.00	0.37	0.20	0.20	[-0.36, 0.76]
Total AP Courses	Equal variances assumed	7.71	0.02	2.13	9.00	0.06	2.63	1.24	[-0.17, 5.43]
	Equal variances not assumed			2.31	6.17	0.06	2.63	1.14	[-0.14, 5.41]
Non Spanish AP	Equal variances assumed	0.87	0.38	1.58	9.00	0.15	0.47	0.29	[-0.20, 1.13]
	Equal variances not assumed			1.61	8.97	0.14	0.47	0.29	[-0.19, 1.12]
AP Tests	Equal variances assumed	4.96	0.05	1.34	9.00	0.21	0.80	0.60	[-0.91, 1.91]
	Equal variances not assumed			1.45	6.43	0.20	0.80	0.55	[-0.86, 1.86]
AP Tests Passed	Equal variances assumed	4.96	0.05	1.34	9.00	0.21	0.80	0.60	[-0.55, 2.15]
	Equal variances not assumed			1.45	6.4	0.20	0.80	0.55	[-0.53, 2.13]
SAT	Equal variances assumed	0.16	0.70	-0.83	9.00	0.43	-0.27	0.32	[-0.99, 0.46]
	Equal variances not assumed			-0.83	8.42	0.43	-0.27	0.32	[-1.01, 0.47]
SAT Score	Equal variances assumed	2.78	0.13	-0.15	9.00	0.89	-71.00	477.73	[-1151.70, 1009.70]
	Equal variances not assumed			-0.16	8.66	0.88	-71.00	459.39	[-1116.52, 974.52]
ACT	Equal variances assumed	0.16	0.70	-0.83	9.00	0.43	-0.27	0.32	[-0.99, 0.46]
	Equal variances not assumed			-.83	8.42	0.43	-0.27	0.32	[-1.01, 0.47]
ACT Score	Equal variances assumed	7.35	0.07	2.43	3.00	0.09	5.50	2.27	[-1.71, 12.71]
	Equal variances not assumed			2.04	1.33	0.24	5.50	2.69	[-13.98, 24.98]

Note. CI = confidence interval

It is of interest that there were no statistical differences in any variable between the means of White compared to Latino DL participants (Table 8 and Table 9) whereas

for EI participants the number of non-Spanish AP courses completed by White students was statistically higher than that of Latinos (Table 10 and Table 11). In the DL program, the means for 9 of the 11 variables were higher for White students than for Latino students. In the EI program, the means were higher for White students were higher than for Latino students for all variables. For white DL and white EI participants, there are no statistical differences in the means of the groups for any of the variables (Table 12 and 13).

Table 8

Descriptive Statistics DL White Compared to DL Latino Students

College Readiness Variable	Ethnicity	*n*	*M*	*SD*	*SEM*
GPA	White	4	3.56	0.65	0.32
	Latino	7	3.13	0.70	0.27
UC a-g courses	White	4	30.50	7.72	3.86
	Latino	7	30.57	6.70	2.53
AP Participation	White	4	1.00	0.00	0.00
	Latino	7	0.86	0.38	0.14
AP courses	White	4	3.75	2.36	1.18
	Latino	7	2.00	2.31	0.87
Non Spanish AP courses	White	4	0.75	0.50	0.25
	Latino	7	0.29	0.49	0.18
AP Tests	White	4	1.50	1.00	0.50
	Latino	7	1.14	1.07	0.40
AP Tests Passed	White	4	1.00	1.41	0.71
	Latino	7	0.43	0.79	0.30
SAT Participation	White	4	0.25	0.50	0.25
	Latino	7	0.57	0.53	0.20
SAT Combined Score	White	4	472.50	945.00	472.50
	Latino	7	700.00	638.72	258.42
ACT Participation	White	4	0.50	0.58	0.29
	Latino	7	0.43	0.53	0.20
ACT Combined Score	White	2	20.50	3.54	2.50
	Latino	3	15.00	1.73	1.00

Table 9

Statistical Analysis DL White Students Compared to DL Latino students

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	*p*	*t*	*Df*	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
GPA	Equal variances assumed	0.11	0.74	0.99	9.00	0.35	0.43	0.43	[-0.55, 1.40]
	Equal variances not assumed			1.01	6.83	0.34	0.43	0.42	[-0.57, 1.42]
UC a-g courses	Equal variances assumed	0.03	0.87	-0.02	9.00	0.99	-0.07	4.43	[-10.08, 9.94]
	Equal variances not assumed			-0.02	5.62	0.99	-0.07	4.62	[-11.56, 1.42]
AP	Equal variances assumed	3.14	0.11	0.74	9.00	0.48	0.14	0.19	[-0.29, 0.58]
	Equal variances not assumed			1.00	6.00	0.36	0.14	0.14	[-0.21, 0.49]
Total AP Courses	Equal variances assumed	0.11	0.75	1.20	9.00	0.26	1.75	1.46	[-1.55, 5.05]
	Equal variances not assumed			1.19	6.24	0.28	1.75	1.47	[-1.81, 5.31]
Non Spanish AP	Equal variances assumed	0.06	0.82	1.51	9.00	0.17	0.46	0.31	[-0.23, 1.16]
	Equal variances not assumed			1.49	6.23	0.18	0.46	0.31	[-0.29, 1.22
AP Tests	Equal variances assumed	0.00	0.95	0.54	9.00	0.60	0.36	0.66	[-1.13, 1.84]
	Equal variances not assumed			0.56	6.76	0.60	0.36	0.64	[-1.17, 1.89]
AP Tests Passed	Equal variances assumed	1.11	0.32	0.88	9.00	0.40	0.57	0.65	[-0.90, 2.04]
	Equal variances not assumed			0.74	4.09	0.50	0.57	0.77	[-1.54, 2.68]
SAT	Equal variances assumed	1.36	0.27	-0.98	9.00	0.35	-0.32	0.33	[-1.06, 0.42]
	Equal variances not assumed			-1.00	6.76	0.35	-0.32	0.32	[-1.09, 0.44]
SAT Score	Equal variances assumed	0.28	0.61	-0.46	9.00	0.65	-227.50	489.26	[-1334.28, 897.28]
	Equal variances not assumed			0.20	5.95	0.85	0.07	538.55	[-1625.20, 1172.20]
ACT	Equal variances assumed	0.07	0.80	0.21	9.00	0.84	0.07	0.34	[-0.71, 0.85]
	Equal variances not assumed			0.20	5.95	0.85	0.07	0.35	[-0.79, 0.94]
ACT Score	Equal variances assumed	7.35	0.07	2.43	3.00	0.09	5.50	2.27	[-1.71, 12.71]
	Equal variances not assumed			2.04	1.33	0.24	5.50	2.69	[-13.9, 24.98]

Note. CI = confidence interval

Table 10

Descriptive Statistics EI White Students Compared to EI Latino Students

College Readiness Variable	Ethnicity	*n*	*M*	*SD*	*SEM*
GPA	White	4	3.34	0.58	0.29
	Latino	7	2.60	0.78	0.30
UC a-g courses	White	4	32.50	5.00	2.50
	Latino	7	20.29	16.17	6.11
AP Participation	White	4	0.75	0.50	0.25
	Latino	7	0.29	0.49	0.18
AP courses	White	4	2.75	3.10	1.55
	Latino	7	0.43	0.79	0.30
Non Spanish AP courses	White	4	0.75	0.50	0.25
	Latino	7	0.14	0.38	0.14
Number of AP tests	White	4	0.50	1.00	0.50
	Latino	7	0.14	0.38	0.14
AP Tests Passed	White	4	0.50	1.00	0.50
	Latino	6	0.17	0.41	0.17
SAT Participation	White	4	0.50	0.58	0.29
	Latino	7	0.43	0.53	0.20
SAT Combined score	White	4	832.50	981.88	490.94
	Latino	7	598.57	752.80	284.53
ACT Participation	White	4	0.25	0.50	0.25
	Latino	7	0.14	0.38	0.14
ACT Combined Score	White	1	29.00		
	Latino				

Table 11

Statistical Analysis of EI White Students Compared to EI Latino Students

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	*p*	*t*	*df*	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
GPA	Equal variances assumed	0.31	0.59	1.64	9.00	0.13	0.74	0.45	[-0.28, 1.77]
	Equal variances not assumed			0.20	5.95	0.85	0.07	0.35	[-0.21, 1.70]
UC a-g courses	Equal variances assumed	8.89	0.02	1.44	9.00	0.18	12.21	8.47	[-6.95, 31.38]
	Equal variances not assumed			1.85	7.74	0.10	12.21	6.60	[-3.10, 27.53]
AP	Equal variances assumed	0.06	0.82	1.51	9.00	0.17	0.46	0.31	[-0.23, 1.16]
	Equal variances not assumed			1.49	6.23	0.18	0.46	0.31	[-0.29, 1.22]
Total AP Courses	Equal variances assumed	6.41	0.03	1.95	9.00	0.08	2.32	1.19	[-0.37, 5.01]
	Equal variances not assumed			1.47	3.22	0.23	2.32	1.58	[-2.50, 7.15]
Non Spanish AP	Equal variances assumed	0.62	0.45	2.29	9.00	0.05	0.61	0.26	[0.01, 1.21]
	Equal variances not assumed			2.11	5.01	0.09	0.61	0.29	[-0.13, 1.35]
AP Tests	Equal variances assumed	4.92	0.05	0.87	9.00	0.41	0.36	0.41	[-0.57, 1.29]
	Equal variances not assumed			0.69	3.50	0.54	0.36	0.52	[-1.17, 1.89]
AP Tests Passed	Equal variances assumed	3.82	0.09	0.75	8.00	0.48	0.33	0.45	[-0.70, 1.36]
	Equal variances not assumed			0.63	3.68	0.56	0.33	0.53	[-1.18, 1.85]
SAT	Equal variances assumed	0.07	0.80	0.21	9.00	0.84	0.07	0.34	[-0.71, 0.85]
	Equal variances not assumed			0.20	5.95	0.85	0.07	0.35	[-0.79, 0.94]
SAT Score	Equal variances assumed	2.06	0.18	0.45	9.00	0.67	233.93	524.09	[-951.66, 1419.51]
	Equal variances not assumed			0.41	5.07	0.70	233.93	567.43	[-1218.84, 1686.70]
ACT	Equal variances assumed	0.62	0.45	0.40	9.00	0.70	0.11	0.26	[-0.49, 0.71]
	Equal variances not assumed			0.37	5.01	0.73	0.11	0.29	[-0.63, 0.85]
ACT Score	Equal variances assumed				0.00		10.00		
	Equal variances not assumed						10.00		

Note. CI = confidence interval

Table 12

Descriptive Statistics White DL Students Compared to White EI Students

College Readiness Variable	Language Program	*n*	*M*	*SD*	*SEM*
GPA	DL	4	3.56	0.65	0.32
	EI	4	3.34	0.58	0.29
UC a-g courses	DL	4	30.50	7.72	3.86
	EI	4	32.50	5.00	2.50
AP Participation	DL	4	1.00	0.00	0.00
	EI	4	0.75	0.50	0.25
Total AP Courses	DL	4	3.75	2.36	1.18
	EI	4	2.75	3.10	1.54
Non-Spanish AP courses	DL	4	0.75	0.50	0.25
	EI	4	0.75	0.50	0.25
Total AP Tests	DL	4	1.50	1.00	0.50
	EI	4	0.50	1.00	0.50
AP Tests Passed	DL	4	1.00	1.41	0.71
	EI	4	0.50	1.00	0.50
SAT Participation	DL	4	0.25	0.50	0.25
	EI	4	0.50	58.00	0.29
SAT Combined Score	DL	4	472.50	945.00	472.50
	EI	4	832.50	981.88	490.94
ACT Participation	DL	4	0.50	0.58	0.29
	EI	4	0.25	0.50	0.25
ACT Combined Score	DL	2	20.50	3.54	2.50
	EI	1	29.00	.	.

Table 13

Statistical Analysis t-test White DL students Compared to White EI students

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	*p*	*t*	*Df*	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
GPA	Equal variances assumed	0.00	0.95	0.49	6.00	0.64	0.22	0.44	[-0.85, 1.28]
	Equal variances not assumed			0.49	5.94	0.64	0.22	0.44	[-0.86, 1.29}
UC a-g courses	Equal variances assumed	0.57	0.48	-0.43	6.00	0.68	-2.00	4.60	[-13.26, 9.26]
	Equal variances not assumed			-0.43	5.14	0.68	-2.00	4.60	[-13.73, 9.73]
AP	Equal variances assumed	9.00	0.02	1.00	6.00	0.36	0.25	0.25	[-0.36, 0.86]
	Equal variances not assumed			1.00	3.00	0.39	0.25	0.25	[-0.55, 1.05]
Total AP Courses	Equal variances assumed	0.23	0.65	0.51	6.00	0.63	1.00	1.95	[-3.76, 5.76]
	Equal variances not assumed			0.51	5.61	0.63	1.00	1.95	[-3.85, 5.85]
Non Spanish AP	Equal variances assumed	0.00	1.00	0.00	6.00	1.00	0.00	0.35	[-0.87, 0.87]
	Equal variances not assumed			0.00	6.00	1.00	0.00	0.35	[-0.87, 0.87]
AP Tests	Equal variances assumed	0.00	1.00	1.41	6.00	0.21	1.00	0.71	[.0.73, 2.73]
	Equal variances not assumed			1.41	6.00	0.21	1.00	0.71	[-0.73, 2.73]
AP Tests Passed	Equal variances assumed	0.27	0.62	0.58	6.00	0.58	0.50	0.87	[-1.62, 2.62]
	Equal variances not assumed			0.58	5.40	0.59	0.50	0.87	[-1.68, 2.68]
SAT	Equal variances assumed	1.00	0.36	-0.65	6.00	0.54	-0.25	0.38	[-1.18, 0.68]
	Equal variances not assumed			-0.65	5.88	0.54	-0.25	0.38	[-1.19, 0.69]
SAT Score	Equal variances assumed	0.23	0.65	-0.53	6.00	0.62	-360.00	681.38	[-2027.28, 1307.28]
	Equal variances not assumed			-0.53	5.99	0.62	-360.00	681.38	[-2027.28, 1307.87]
ACT	Equal variances assumed		0.36	0.65	6.00	0.54	0.25	0.38	[-0.68, 1.18]
	Equal variances not assumed			0.65	5.88	0.54	0.25	0.38	[-0.69, 1.19]
ACT Score	Equal variances assumed			-1.96	1.00	0.30	-8.50	4.33	[-63.52, 46.52]
	Equal variances not assumed						-8.50		

Table 14

Descriptive Statistics of DL Latino Students Compared to EI White Students

	Language Program	*N*	*M*	*SD*	*SEM*
GPA	DL	7	3.13	0.70	0.27
	EI	4	3.34	0.58	0.29
UC courses	DL	7	30.57	6.70	2.53
	EI	4	32.50	5.00	2.50
AP Participation	DL	7	0.86	0.38	0.14
	EI	4	0.75	0.50	0.25
AP Courses	DL	7	2.00	2.31	0.87
	EI	4	2.75	3.10	1.55
Non Spanish AP	DL	7	0.29	0.49	0.18
	EI	4	0.70	0.50	0.25
AP tests	DL	7	1.14	1.07	0.40
	EI	4	0.50	1.00	0.50
AP tests passed	DL	7	0.43	0.79	0.30
	EI	4	0.50	1.00	0.50
SAT Participation	DL	7	0.57	0.53	0.20
	EI	4	0.50	0.58	0.29
SAT Score	DL	7	700.00	683.72	258.42
	EI	4	832.50	981.88	490.94
ACT Participation	DL	7	0.43	0.53	0.20
	EI	4	0.25	0.50	0.25
ACT Score	DL	3	15.00	1.73	1.00
	EI	1	29.00	.	.

Table 15

Statistical Analysis for DL Latino Students Compared to EI White Students

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	*p*	*t*	*df*	Sig. (2-tailed)	Mean Diff.	SED	95% CI [Lower, Upper]
GPA	Equal variances assumed	0.10	0.76	-0.50	9.00	0.63	-0.21	0.42	[-1.15, 0.73]
	Equal variances not assumed			-0.53	7.46	0.61	-0.21	0.39	[-1.13, 0.71]
UC a-g courses	Equal variances assumed	0.48	0.51	-0.50	9.00	0.63	-1.93	3.88	[-10.70, 6.85]
	Equal variances not assumed			-0.54	8.07	0.60	-1.93	3.56	[-10.12, 6.27]
AP	Equal variances Assumed	0.62	0.45	0.41	9.00	0.70	0.11	0.26	[-0.49, 0.71]
	Equal variances not assumed			0.37	5.01	0.73	0.11	0.29	[-0.63, 0.85]
Total AP Courses	Equal variances assumed	0.59	0.46	-0.46	9.00	0.66	-0.75	1.63	[-4.43, 2.93]
	Equal variances not assumed			-0.42	4.96	0.69	-0.75	1.78	[-5.33, 3.83]
Non Spanish AP	Equal variances assumed	0.06	0.82	-1.51	9.0	0.17	-0.46	0.31	[-1.16, 0.23]
	Equal variances not assumed			-1.49	6.23	0.18	-0.46	0.32	[-1.22, 0.29]
AP Tests	Equal variances assumed	0.00	0.95	0.98	9.00	0.35	0.64	0.66	[-1.30, 1.15]
	Equal variances not assumed			1.00	6.76	0.35	0.64	0.64	[-1.55, 1.41]
AP Tests Passed	Equal variances assumed	0.24	0.64	-0.13	9.00	0.90	-0.07	0.54	[-1.30, 1.15]
	Equal variances not assumed			-0.12	5.17	0.91	-0.07	0.58	[-1.55, 1.41]
SAT	Equal variances assumed	0.07	0.80	0.21	9.00	0.84	0.07	0.34	[0.71, 0.85]
	Equal variances not assumed			0.20	5.94	0.85	0.07	0.35	[-0.79, 0.94]
SAT Score	Equal variances assumed	3.06	0.11	-0.27	9.00	.80	-132.50	498.68	[-1260.59, 995.59]
	Equal variances not assumed			-0.24	4.71	0.82	-132.50	554.80	[-1585.29, 1320.29]
ACT	Equal variances assumed	1.36	0.27	0.54	9.00	0.60	0.18	0.33	[-0.56, 0.92]
	Equal variances not assumed			0.56	6.76	0.60	0.18	0.32	[-0.59, 0.94]
ACT Score	Equal variances assumed			-7.00	2	0.02	-14.00	2.00	[-22.61, -5.40]
	Equal variances not assumed								

As I completed the transcript analysis, I reviewed the course history for each participant for each of the 4 year of high school including summer school, adult

education, and online coursework. The transcript review of all DL participants indicated that DL students took no more than 4 and an average of 1.75 semesters of content coursework with Spanish as the language of instruction. The Spanish language content courses are separate from Spanish Language coursework such as AP Spanish Language and Spanish for International Careers. Examples of content courses DL students took in Spanish include Health and Agricultural Biology. None of the honors or AP courses students took were delivered in Spanish language instruction.

Table 16

Dual Language Content Course Semesters Descriptive Statistics

Spanish Content Courses	*n*	Minimum	Maximum	*M*	*SD*
	11	0.00	4.00	1.64	1.75

Qualitative data analysis

The qualitative interview of students, teachers, and a parent answered the second research question: how do students (over age 18), teachers, and parents describe their perceptions of the effects of a K-12 DL on student college readiness? I individually interviewed two students, one parent, a counselor, and four teachers (Spanish, science, English, and shop) at the DL high school. Each participant signed an informed consent agreement and I provided him or her with a copy of the interview questions (Appendix B). I asked clarifying and follow-up questions when necessary.

After a preliminary exploratory analysis using NVivo ™ software, I coded the interview transcripts and field notes using axial coding to identify common themes. I explored the transcripts and compared them to the field notes. Initial themes that

emerged include high expectations, parental involvement, and rigorous preparation. Students, staff, and the parent interviewed all referred to these overarching concepts. In addition, staff frequently mentioned their desire to have DL students more clearly identified in the school district student record system and the benefits of bilingualism (interview transcripts available with raw data).

For the theme of high expectations, subthemes of parent and teacher expectations were present. Students referred to the high postsecondary expectations that parents of DL students hold for their children. Student 1 stated that the school's expectation was "They probably always expected me to go to a four year. They're always saying, 'Your grades are high enough.' I just needed one more course (UC a-g) which I didn't take." Referring to his parents and the school's expectations for him, Student 2 stated "I was expected to go off to a four year university and probably study politics and Spanish, so I think it's gone just as expected and I've been pleased with my, uh, college experiences so far." The students perceived that the school has varied expectations for students. After describing the school's expectation that he would go on to a four-year university, I asked Student 2 if that was the school's expectation for all students. He answered "For most I would say. For some, if they just aren't trying, they aren't expecting them to go to a four year. They expect them to go to either (the local community college) or just get out working right away."

Interview data from the staff also show the theme of high expectations. Staff referred to their own high expectations for DL students. Staff also commented on DL

parents' high expectations and high levels of parent involvement. The counselor interviewed stated:

> The main thing that I've noticed with the TWI students is um, they're very much on top of their academics and their parents are as well. So if there's any sort of issue in the classroom I will hear from them and their parents quicker than the non-TWI students and they do it in a very respectful way but um, they know what they should be getting, and, and don't just let it lie as if it's not there. So that's nice. They advocate for themselves well.

Teachers concurred with the idea that DL parents may have higher postsecondary expectations for their DL students. With regard to DL parents, Teacher 1 stated:

> TWI I kind of see as a different thing as parents who want their kids to be in an immersion school. I guess you have two different types though, you have your English speakers and your Spanish speakers. Um, but I think that anything that has parent involvement that you sign them up, that you know what you're getting into, that you want them to be immersed. I want to say that those families' expectations might be a generalization, I would think they're higher.

The parent interview aligned with these perceptions when the DL mother stated

> And I think from the time he was a young child we always talked about college, that was the next step. There was never any question about going to college. He was going, just didn't know where and so, he applied, I was very proud of him; he applied to 12 colleges and was accepted at 11.

Teacher 2 also shared the perceived high expectations and resourcefulness of DL parents

and said “Well I just think that typically people whose parents put them in the TWI are more resourceful so they have more access to what might be available for college.” The counselor and Teacher 1 both specifically mentioned school parent participation in programs that explain college readiness such as Parent Institute for Quality Education (PIQE) classes and college nights at the school. Teacher 2 also shared his perspective that the school has high expectations for all students:

> Yeah, I can’t imagine there being a difference in expectation. Um, but I just think that if we’ve, I think our job is to put everyone through college but then again some people aren’t ready for college but at least they’ll leave with, you know a diploma.

While Teacher 2 went on to share that he feels the site principal, administration, and staff members all have high expectations and rigorous standards, the parent shared a different perspective:

> Um, I’m not always sure about the expectations, if kids are not in the more advanced classes about, I can’t really say, um, but being a former high school teacher myself at another site, I am not always sure that is the expectation. I think sometimes the expectation is that they’ll get a diploma and they should be happy with that, kind of the underlying aspiration.

The question of whether or not the participants perceived that school has the same expectations for all students as it does DL students was not answered clearly by the interviews as there were conflicting opinions within the stakeholder groups.

Rigorous preparation as a second theme had subthemes of UC a-g, honors, and AP coursework as well as school-wide systems to ensure college preparedness. Both students referred to the rigorous coursework they took including UC a-g courses, honors, and Spanish and non-Spanish AP courses. The teachers, counselor, and parent echoed that DL students are taking rigorous coursework when compared to EI students. The counselor stated:

> I see them able to take more rigorous coursework in language quicker obviously and free up space for more academics and they're filling it up with academics instead of, you know, just wood, or digital photography. They're taking a, a, a, a more rigorous course load because they've taken so much language or add a third, you know.

Describing differences in the rigor of coursework and levels of motivation for EI compared to DL students, Teacher 1 stated:

> Um, well the SDAIE [EI] students, for whatever reason, that's a college prep course but it's a whole different level and so we move much slower to scaffold it and, um, motivation might be a little bit different versus students who are in our regular college prep program might have the support of AVID, um, might have more intrinsic motivation. I guess that's maybe a generalization but that's kind of my experience.

When asked how prepared her DL son was for college, the parent responded "I felt he was very prepared for (name of college) because of the number of AP courses he took."

The interview participants, overall, shared positive perceptions of the DL program. When I asked Student 1 if there was anything he wanted to add to the interview he stated "I definitely want to reiterate that I thought the Two-Way Immersion Program was a great experience. I am glad to see that it's—there's more, uh, schools that are adopting it now in (the school district)." Teacher 3 also expressed positive perceptions about DL students' level of preparedness when she said:

> They seem more mature and they seem more able. They seem more capable. They seem, umm, as if they already get it. And that's coming in in 10th grade. So I have 10th, 11th, and 12th graders in the same class, and some of my 10th grade TWI kids are way more ready and mature than my 12th grade non-TWI kids. And this is in the same level class.

The themes of high postsecondary expectations, high levels of parent involvement, and preparation with rigorous coursework illustrate the participants' perceived positive effects of the DL program on college readiness.

In interviews with staff, teachers stated that they were unsure exactly which students were participating in the DL program. Teacher 4 stated:

> I don't have a lot of data as far as uh, having the students classified for me. Like it's not on their attendance like FEP or all of the acronyms that are available to me on my role sheet. So I don't have any way to compare them.

Teacher 1 and Teacher 3 mentioned that that they found out about student DL status anecdotally or by asking the students directly. Teachers recommended having the program participation clearly marked in the student record system.

Summary of Findings

The purpose of the quantitative study was to see what effects, if any, the DL program had on IEL and other students' college readiness indicators including GPA, UC a-g courses, AP, SAT, and ACT. The demographics of the DL cohorts of 2013 and 2014 showed that the DL students had more at-risk factors when compared to the non DL cohorts of the same years. The DL cohort had more Latino students, more Initial English only students, more students of poverty, and less GATE identified students (Table 1). Despite these factors, the DL students, including Latino students and IELs, were achieving at statistically the same levels as the EI White, EO students for all but one indicator (ACT combined score, Tables 14 and 15).

The transcript study demonstrated that IEL DL students had higher means on all indicators except ACT score, passed statistically more AP courses, and took statistically more AP exams than the IEL students who participated in the EI program (Tables 2 and 3).Dual language IELs and DL Latinos were statistically more likely to participate in AP courses and tests and had higher means on many indicators than their non DL counterparts (Tables 3-5). Whereas statistically significant achievement gaps were found in the EI student population (Tables 10 and 11), there was no statistical achievement gap between EO DL and IEL Latino DL students (Table 6 and 7), White DL students and Latino DL students (Table 8 and 9) nor between Latino DL and White EI students (with the exception of ACT score where White EI students scored statistically higher) (Table 14 and 15). Dual language Latino students had higher means than DL White students on

UC a-g courses, SAT participation, and SAT combined score (Table 6). White DL students scored statistically the same as White EI students (Table 12 and 13).

It is important to recognize that in addition to the rigorous coursework and levels of preparation commensurate to their EI counterparts, the DL students are leaving high school with the additional skills of bilingualism, biliteracy, and biculturalism, which was reiterated in the parent, teacher, and student interviews. Themes of high expectations, rigorous coursework, and parent involvement also emerged from the qualitative data. Interview participants reported perceived positive effects of the DL program on student college readiness levels complementing the quantitative study's positive findings.

The study findings, overall, demonstrate that the DL program had a positive effect on student college readiness levels. Two opportunities for improvement that came out of the data were (a) the offering of more content courses with Spanish Language instruction and (b) to ensure that DL students are clearly marked in the district record system. The finding that students are averaging 1.75 content courses in Spanish (Table 16) was of interest because the research-based high school model is 50% of core content delivered in Spanish or no less than one Spanish course and one Spanish content course per year (de Jong & Bearse, 2014; Montone & Loeb, 2000), which would be 8 semesters of content courses and 8 semesters of language courses. With regard to clearly marking students in the district system as mentioned during staff interviews, the recommendation would facilitate the use of student data as the basis for collaborative inquiry which has been shown to improve academic results for all students (Bianco, 2010; Kronholz, 2012; Love, 2009; Pella 2012).

Conclusion

In Section 2 I examined how both DL and EI language model programs were evaluated for their effects on college readiness levels. I also explained the mixed methods research methods and sequential explanatory design and how the method and design align to the research questions. I included the protections of participants' rights and described the formative program evaluation scope and limitations. Finally, I explained the methods of data collection for both the quantitative and qualitative approaches, provided the details of the proposed data analysis and validation methods, and described the quantitative and qualitative findings. Overall, the findings demonstrate that the DL program is having a positive impact on student college readiness levels. In Section 3 I will describe the program evaluation including the rationale, a literature review, and the implications of the program evaluation.

Section 3: The Project

Introduction

In Section 2 I provided the methodology for assessing the effects of a dual language program on college readiness levels, the steps used to collect data for evaluation of the DL program, and the data analysis. The purpose of the project was to inform all district stakeholders of the impacts of the DL program so that district and school leaders may begin the process of improving and/or expanding the DL program. An effective program is critical to meet the needs of at-risk students, improve student achievement, and increase the number of students prepared for success in college and careers. The data findings in Section 2 indicated areas of strength and opportunities for improvement for the DL program. Section 3 focuses on the rationale for a formative program evaluation and white paper, a literature review aligned to the strengths and weaknesses of the DL program, and suggestions for improvement of the DL program. A white paper for the project study is included (Appendix A) as well as a discussion on implications for social change in the local community.

Description and Goals of Program Evaluation White Paper

The purpose of the sequential, explanatory, mixed-methods program evaluation study was to measure what, if any, effects a DL program has on improving the college readiness of students. Locally and nationally there are significant achievement gaps between demographic groups based on varying socioeconomic status levels and racial groups with White students consistently outperforming Latino students and EL students. The formative program evaluation analyzed college readiness transcript data with

comparisons between groups to evaluate what effect, if any, the DL program has on closing the achievement gap. In addition, the program evaluation relied on interviews of DL students, teachers, and parents who describe their perceptions of the effects of DL on college readiness levels. The goal of the program evaluation was to provide data, analysis, and recommendations to be used for program improvement. The results and recommendations of the program evaluation will be presented to stakeholders in the form of a white paper with the intent of bringing about positive changes in the program. For the project study, the project for the evaluation was the program evaluation itself and the product and genre was the white paper.

Rationale

A program evaluation of the DL program's impact on college readiness was warranted to determine the areas of strengths and opportunities for improvement for the previously unevaluated language program. The district's large socioeconomically-disadvantaged, Latino, and EL populations are a growing group of at-risk students with diverse learning needs including the need for language acquisition support. A program evaluation delivered in the form of a white paper was useful to provide the school staff, administration, and other stakeholders with information regarding the program's effectiveness with regard to student achievement.

The goal of the formative program evaluation was to assess the academic achievement results, provide areas for program improvement and expansion, and to gather information for decisions regarding the program (Lodico et al., 2010). The final product for the project study was a formative program evaluation with the preparation of

a white paper that includes recommendations for future practices. The data analysis in Section 2 contains areas for program commendations and areas where there are opportunities to improve. A white paper was an appropriate method of communicating this information to stakeholders for their use in decision-making (Johnson-Sheehan, 2010; Willerton, 2013). Dual language programs are only a viable solution to the achievement gap problem if the individual programs are effective. The white paper is the most effective way to communicate the effects of the DL program on college readiness to the district stakeholders and decision-makers with the power to use the recommendations for program improvement.

Review of the Literature

The literature review focused on the rationale for a formative evaluation and white paper for a project study, the research-based model for DL high school, the impact of high expectations, parent involvement, and the use of data to evaluate instruction and instructional programs. Multiple databases and sources provided information for this literature review. I searched the Walden Library including ERIC, Education Research Complete, SAGE Premier, ProQuest, and Business Source Complete. I used search terms with the Boolean AND including: white papers, secondary, high school, dual language, high expectations, parent involvement, and data-driven instruction. In addition to scholarly journals, I used books listed in the references for recent white paper articles for more detailed information on white paper purpose and content because I found limited information and examples of white papers in peer-reviewed journals. I used peer

reviewed scholarly journals and Walden University coursework textbooks for sources for the topic of data-driven instruction.

Choice of Formative Evaluation and White Paper for Project Study

A formative evaluation allows the stakeholders to see the program's areas of strengths and needed improvement while evaluating program data as a whole (Olson, 2010). A formative program evaluation as described by Olson (2010) was appropriate for the project because the high school DL program had not yet been evaluated and the project study goal was to improve the program and, therefore, student achievement based on data collected.

According to Kiely (2009) the best results of a program evaluation study are obtained by using varied methods to gather data from a variety of sources. The results become more valid with both depth and variation of data (Kiely 2009; Zohrabi, 2011). The project study included quantitative and qualitative data collected from a variety of sources including selected transcript data as well as interview responses from varied participants. The formative program evaluation was appropriate to the problem because it can be used for decision making. The formative evaluation provides commendations and recommendations for improvement that the program stakeholders may or may not decide to implement as part of a continuous improvement cycle. According to Olson (2010):

> Program evaluation involves identifying program stakeholders, generating an accurate description of the program and its intended purpose, selecting the proper

> evaluation model and methods to meet the intended purpose of the evaluation, and then generating credible data that are used to justify conclusions regarding the value of the program. Conclusions are then shared with the individuals responsible for initiating the program evaluation and are used to improve the program.

The white paper for the project study included a program description, goals of the program, and the methodology of the study, data analysis, study conclusions, and program recommendations. The white paper will be shared with district and community members in a presentation and will be available for distribution.

A white paper is a summary report that effectively informs or persuades a specific audience about complicated technical information (Johnson-Sheehan, 2010; Willerton, 2013). The white paper is an effective way to present information to the district about the effects of the DL program on college readiness levels because it provides information, data analysis, and recommendations for improvement in a manner that is concise and clear to the target audience (Johnson-Sheehan, 2010). For example, the DL program deserves recognition for progress towards closing the achievement gap. The findings show that there was no statistically significant achievement gap for between White and Latino students in the DL program for any variable (Table 8 and Table 9) whereas gaps were seen in the EI program (Tables 10 and 11). In the DL program, Latino DL students had higher means than their White DL counterparts on three indicators (Table 8). In the EI program, the means were higher for White students were higher than for Latino students for all variables (Table 11). The white paper provides the information to

stakeholders in a more understandable manner written to the level of the target audience without inappropriate and confusing jargon (Johnson-Sheehan, 2010). The short, clear, concise report of findings in the white paper shows the aligned recommendations for improvement.

The Impact of High Expectations

The qualitative part of the study revealed that students, the parent, and staff all reported perceived high expectations of DL students, which included students' expectations of themselves, their parent's expectations, the teachers' expectations, and the schools expectations as a whole. The results suggested that these perceived expectations may play a role in the college readiness levels of the DL students. Whether the expectations for non DL students were equally high was not completely clear in the interviews.

The impact of high expectations on student achievement is not a new concept. The classic Pygmalion study of 1965 demonstrated that by telling teachers that at-risk students were high performing students, the teachers' high expectations became self-fulfilling prophecies for the students (Rosenthal & Jacobson, 1968). Current research continues to demonstrate the link between teacher, counselor, and principal expectations with rigorous coursework and student performance (Achieve, Inc., 2012; Balfanz, Bridgeland, Bruce, & Fox, 2012 ;). A recent survey of teachers demonstrated that 86% perceived that setting high expectations will improve student achievement (Achieve, In., 2012).

Having high expectations for students regardless of their backgrounds, income levels, ethnicity, and language is linked to higher achievement (Balfanz, Bridgeland, Bruce, & Fox, 2012). Student expectations of themselves can also affect achievement. According to Lee, Hill, & Hawkins (2012) student expectations of themselves can predict their high school graduation and family income at the age of 30. When schools hold high expectations and provide support for those expectations, the achievement gap begins to close (Balfanz, Bridgeland, Bruce, & Fox, 2012).

Commendation: It is to be commended that all stakeholders reported perceived high expectations of DL students by the students, parent, and staff.

Recommendation: It is recommended that the site and district continue to hold high expectations for all students and to clearly communicate those expectations to all stakeholders for the benefit of student achievement.

The Importance of Parent Involvement

The qualitative findings showed that staff perceived high levels of parent involvement among DL parents. Increasing participation and the school-parent connection has been shown to be an effective strategy for raising student achievement and closing the achievement gap (Gerena, 2011; Good, Masewicz, & Vogel, 2010; Ryan et al., 2011). According to the classic work of Epstein (1997, 1991, 1986) there are six main types of school-parent connections. Epstein explains that the onus is on both parents and schools to work to build effective partnerships. Each typology has potential benefits for students, staff, and parents (Epstein et al., 1997, Epstein, 1991, Epstein, 1987). Epstein's typologies include:

1. Type 1- Parenting
2. Type 2- Communicating
3. Type 3- Volunteering
4. Type 4- Learning at Home
5. Type 5- Decision Making
6. Type 6- Collaborating with the Community

Dual language programs often report challenges with high levels of parent involvement due to barriers including communication gaps, language barriers, and cultural, differences (Ryan et al, 2011).

Commendation: In the interview data, the staff reported their perceptions that DL parents participate and are involved in school functions including those related to college readiness.

Recommendation: It is recommended that the district and site build on parent involvement in both the DL and EI programs so that students, parents, and staff reap the benefits of strong connections for all the typologies. Specifically, it is recommended that the school and district continue to inform parents of the steps toward student college readiness and how to gain access to college through programs like PIQE.

Secondary Model for Dual Language

The DL high school in the study has successfully offered and enrolled students in four years of Spanish language courses such as AP Spanish and Spanish for International Careers. Apart from these Spanish courses, the transcript analysis demonstrated that DL students were averaging 1.75 content courses in Spanish (Table 16). The finding was of

interest because the research-based high school model is 50% of core content delivered in Spanish or no less than one Spanish course and one Spanish content course per year (de Jong & Bearse, 2014; Montone & Loeb, 2000), which would be 8 semesters of content courses and 8 semesters of language courses.

The most consequential negative impacts of having less Spanish courses than the research-based model are issues of linguistic inequity (Jong & Bearse, 2014; Montone & Loeb, 2000), which includes creating the perception that the minority language is less valuable or desirable. Language inequity also results in lower levels of proficiency in the languages. Other potential issues include lack of interdisciplinary structures that support language acquisition and the misperception that DL classes are electives and not an essential part of core instruction (de Jong & Bearse, 2014)

Dual language programs are increasing in popularity across the United States (de Jong & Bearse, 2012). Most DL programs, however, are at the elementary level. The number of DL programs drops significantly at the middle school level and then again at the high school level (de Jong & Bearse, 2012). Montone and Loeb argue that the attrition is due to issues specific to the middle and high levels school. Challenges to maintaining DL programs in high school include planning the program, language distribution, staffing, and student scheduling. According to Montone and Loeb (2000):

> If participation in the TWI program means not being able to take electives, having an extra period each day, having a longer commute, or being at a different school than their friends, even previously successful and dedicated students may determine that the sacrifice is too great and balk at continuing in the program.

The above mentioned challenges may have resulted in the offering of fewer courses than required by the research-based DL model.

Commendation: Despite the challenges DL high schools face for implementation as presented in the literature, it is to be commended that the site and district continue to support and provide Spanish language courses at the high levels of the DL students and offers some content courses in Spanish. It is crucial to recognize that in addition to the rigorous coursework and high levels of preparation, the DL students are leaving high school with the additional 21st skills of bilingualism, biliteracy, and biculturalism.

Recommendation: It is recommended that the district and site staff meet to review the causes and justifications of the scheduling and find solutions to bring the program to model standards. The potential impact of providing the program outside of the model is of concern. The high enrollment of DL students in rigorous coursework including UC a-g, honors, and AP and classes suggests that offering Spanish content courses at the honors and AP level may be a potential solution.

Data-driven instruction and decision-making

In interviews with staff, teachers stated that they were unsure exactly which students were participating in the DL program. Teacher 1, Teacher 3, and Teacher 4 all mentioned that that they found out about student DL status anecdotally or by asking the students directly. Teachers recommended having the program participation clearly marked in the student record system. Having clearly identified, direct access to student program information is an important part of a data-driven continuous improvement cycle (Bianco, 2010; Depka, 2009; Kronholz, 2012; Pella 2012). In addition, the clear

identification of DL students in the student record system is important to data stewardship. According to the National Center for Education Statistics (2010):

> Data stewardship is an organizational commitment to ensure that data in education records, including personally identifiable information:
>
> - Are accurate, complete, timely, and relevant for the intended purpose;
> - Are collected, maintained, used, and disseminated in a way that respects privacy and ensures confidentiality and security;
> - Meet the goals of promoting access to the data for evaluating and monitoring educational progress and educational programs; and
> - Meet the goals of assuring accuracy to ensure that decisions relating to an individual student's rights and educational opportunities are based on the best possible information (p. 1).

Teachers need access to individual program data to monitor progress and plan instruction that meets the needs of individual students Bianco, 2010; Kronhoz, 2012, Pella, 2012). According to Holcomb (2004), "Only by looking at student performance by name and visualizing those students face by face are we able to focus on each child's leaning needs as an individual," (p. 156). Group and individual student data that is broken down into skill areas or strands gives teachers a snapshot of student progress while allowing for the examination of class, grade-level, or cohort trends. The same concept is true on a program level.

Schools with data cultures review whole school, grade-level, and individual data as well as data disaggregated by subgroups including gender, race, and socioeconomic

status (Bianco, 2010; Depka, 2009; Kronholz, 2012; Pella, 2012). The data should be used to set school-wide goals and objectives. Progress toward those goals needs to be constantly monitored through both formative and summative assessments. According to Holcomb (2004):

> Drilling down the skill-specific data means looking at the item-analysis reports that provide a breakdown of skills or subtests. Three years of reports should be compared in order to see any pattern where many different groups of students have consistently struggled with the same skills" (p. 152).

The DL high school has a data cycle as part of its Western Association of Schools and Colleges (WASC) accreditation (WASC, 2014). The incorporation of DL data into the WASC continuous improvement cycle would allow stakeholders to the systematic, progress monitoring and ongoing formative program evaluation of the DL program. The type can be effective at raising student achievement (Creswell, 2012).

Recommendation: It is recommended that the district clearly identify DL students in the student management system as part of data stewardship.

Recommendation: It is recommended that the high school incorporate disaggregated DL student data as part of a culture of data including the WASC accreditation cycle.

Expansion of Dual Language Opportunities to More Children

Dual language programs have demonstrated promising evidence of increasing student achievement and motivation to attend college (Lindholm- Leary, 2005). The results of the study indicate that IEL DL students have attained a higher level of college

readiness than their IEL EO counterparts. The results also show the DL program's has had a positive effect on closing the achievement gap. Students, a parent, and staff perceive that the DL program has had a positive impact on college readiness. In addition to high levels of achievement, the DL students are bilingual, biliterate, and more prepared for the global careers of tomorrow. Expansion of the DL opportunities in the district would allow more students to reap the benefits of the program and have a wider reach towards positive social change.

Implementation

The purpose of the sequential, explanatory, mixed-methods, formative program evaluation study is to measure what, if any, effects the program has on improving the college readiness of students. The goal of the white paper project is to convey the results, commendations, and recommendations to the stakeholders for further discussion and action. The presentation of the white paper to the stakeholders is the first step of implementation of the project study.

Potential Resources and Existing Supports

The district educational services department, the multilingual and multicultural Education department, the District English Learner Advisory Committee (composed of parents of EL students) and the DL high school itself are the best resources for implementing the recommendations of the program evaluation. The superintendent, assistant superintendent of educational services, and director of the multilingual and multicultural education department are all advocates of DL programs and have the resources and decision-making power to support the high school with the

recommendations if deemed appropriate. Resources include district and site local control funding dollars allocated to support the needs of EL students.

Potential Barriers

The goals of the formative evaluation and white paper were to provide stakeholders with data as the impetus for student-centered inquiry, recommendations toward improvement, and establish a system for progress monitoring of DL student data. One potential barrier to the project study is finding the appropriate day and time to present the white paper both at the site and district levels. A final potential barrier is that the stakeholders will not implement any of the recommendations. The risk is associated with any formative evaluation (Kiely, 2009).

Proposal for Implementation and Timetable

The presentation of the white paper and sharing of formative evaluation will occur within 8 weeks of the project receiving final Walden approval, unless that falls during summer break. In that case the presentation will be made in the following August. A brief survey will be provided to stakeholders at that time to gather feedback on the white paper for evaluation and input after the presentation.

Roles and Responsibilities of Student and Others

Next Steps

The next step will be the discussion, collaboration, and potential planning that results from the presentation of the white paper. The results of the brief survey will be provided to district stakeholders to guide collaborative decision-making as the recommendations and potential changes are discussed.

Implications Including Social Change

The white paper from the project study could benefit students, the district, and the local community because the paper addressed specific recommendations for the DL program based on the study data findings. Recommendations included adding more Spanish content courses (including honors and AP courses) to match the research-based secondary DL model, building on the school and home culture of high expectations, incorporating DL program review as part of the school data cycle, and expanding the elementary DL programs to provide more chances for students to participate. The district could implement one or more of the suggestions in the white paper thereby raising student achievement and college readiness, creating opportunities for more students, and bringing about social change.

Local Community

Although the local district routinely evaluates academic performance of K-8 students in various EL program settings, there is a gap in practice with regard to the evaluation of high school students' achievement and college readiness comparing DL to EI and other students. Recent accountability scores demonstrate that less than half of the district's students are achieving at the proficient level and less than 35% of students' district-wide are classified as "college ready" by the California university systems (California Department of Education, 2012). The formative evaluation study addresses the achievement gap and local gap in practice, examines the effects, and reports findings and recommendations to the stakeholders in the form of a white paper so that the district can know where to improve and expand their program for the most student benefit.

Far-Reaching

Dual language programs are increasing in popularity across the nation with most DL programs currently being implemented at the elementary level (de Jong & Bearse, 2012). As students from these programs move on to middle and high school, there is a need to continue DL programs through graduation (Montone & Loeb, 2000). The study's quantitative and qualitative data add to the limited data currently published regarding DL and college readiness. As districts research K-12 DL programs, the findings and recommendations of the study may be referenced, found to be relevant, and positively impact student achievement and create positive social change in other school districts both near and afar.

Conclusion

The program evaluation of the impact of the DL program on college readiness levels revealed a number of strengths and areas for opportunities that developed over the course of program implementation. The body of research found in the literature review supports the choice of a program evaluation and white paper as a project genre and formed the basis for the suggested recommendations to improve and expand the DL program. In Section 3 I also provided a discussion of potential barriers to implementing the white paper and a description of how and when the evaluation results will be delivered to the stakeholders. Finally, in Section 3 I discussed the project's implications for social change in the community.

In Section 4 I will discuss the strengths and limitations of the program evaluation and provide alternative approaches to the study problem. I will provide an analysis of

scholarship embedded in the study, project evaluation, and an analysis of myself as a scholar-practitioner. I conclude the project study with a discussion of potential for social change and an exploration of the project's implications, applications and the direction for future research in this area.

Section 4: Reflections and Conclusions

Introduction

Section 4 focuses on reflections and conclusions from the doctoral study. In Section 4 I provide a discussion of the project's strengths and weaknesses, project limitations, and recommendations for different ways to address the problem. I also include personal reflections on scholarship and leadership, project development, and the need for social change. The doctoral study concludes with a discussion of applications, implications, and directions for future research.

Project Strengths, Weaknesses, and Limitations

The purpose of the formative evaluation and white paper project was to inform all district stakeholders of the impacts of the DL program so that district and school leaders may begin the process of improving and/or expanding the DL program to meet the needs of at-risk students, improve student achievement, and increase the number of students prepared for success in college and careers. The study informs local school practices, addresses a gap, evaluates a program that has not been assessed with regard to college readiness, and helps identify which language program better prepares students for postsecondary success. The study also addresses a gap in the literature with regard to DL programs and college readiness.

The project study's recommendations were a strength as the study provided data-based evidence to support district expansion of K-12 DL model program opportunities, the addition of Spanish language content AP courses, the incorporation of DL cohort data into the WASC continuous improvement cycle, and the continued focus on high

expectations and college-bound culture for all students as strategies to close the achievement gap. The implementation of these recommendations including the expansion of the DL program is a "promising practice" for bringing about positive social change (Lindholm-Leary, 2005). In addition, the literature review provided information regarding language acquisition and for closing the achievement gap (Lindholm-Leary, 2005). The study's quantitative and qualitative data complemented each other, gave voice to the stakeholders, and added to the limited data currently published regarding DL and college readiness. A final strength is that the white paper provided district leadership, principals, teachers, staff, parents, and the community with information regarding the formative academic results and level of preparation of students in the DL program that can be used for further evaluation.

One weakness of the study is that it was conducted by an internal evaluator; and therefore, had the risk of decreased objectivity (Lodico, et al., 2010). The member checks served to mitigate the risk. Additional significant weaknesses and limitations of the study include the small sample sizes, the absence of EI student and parent interview participants, and the formative nature of the study. Taken together, these factors preclude the generalization of the results to other DL programs. The results of the study were limited to the DL high school graduating classes of 2013 and 2014.

Recommendations for Remediation of Limitations

The white paper is not the solution to the achievement gap problem. It is hoped, however, that the school and district discussions which result from the white paper presentation will be the impetus for positive change. As above mentioned, the limited

sample size and formative nature of the evaluation prevent conclusions from being extrapolated to other cohorts or programs. Continuing to evaluate the program with more cohort data is recommended. As suggested in the white paper, it is important to clearly identify the DL students' program participation in the district student record system. Identification would help teachers to differentiate instruction and support as needed and allow for ease in tracking achievement data for DL students as a demographic group in continuous data cycle reviews such as WASC. The regular collection of DL achievement data as part of the continuous improvement cycle allows for systematic, ongoing formative program evaluation and action research (Creswell, 2012).

Scholarship

A scholar is an expert in a field with a profound depth of knowledge in his/her subject matter. Scholars follow the process of research when looking to expand their knowledge, improve practices, and inform policy debates (Creswell, 2012). Scholars (a) identify a research problem, (b) review the literature, (c) specify a purpose, (d) collect data, (e) analyze and interpret data, and (f) report and evaluate research (Creswell, 2012, p. 7).

In addition to following the research process, scholars are critical readers and thinkers who apply these skills as both consumers and producers of research. Scholars synthesize, evaluate, compare, contrast, and analyze information to inductively or deductively reason and make logical meaning. Scholars strive to be objective and both recognize and minimize bias. Scholars are mindful of the need for strong ethical

practices, especially when collecting data, writing, and publishing reports (Creswell, 2012).

Project Development and Evaluation

The program evaluation project was a direct extension of the study and it was planned from the development of the research questions. I selected the project genre and product (formative evaluation and white paper) early on in the study, which helped to keep the problem, research questions, methodology, and project all aligned throughout the study and project development process. A curriculum unit, professional development plan, or policy paper would not meet the local need to evaluate the DL program. The white paper also aligned with the need to communicate recommendations to stakeholders.

The development of the actual white paper involved a review of the literature on white papers as well as a review of Walden student examples in ProQuest. In addition, I collected and reviewed samples of district literature to help select the appropriate voice and reading level for the diverse intended audience. I will also create a Spanish version of the white paper and provide it to the district for distribution to Spanish-speaking families and community members. I developed a brief Surveymonkey survey for stakeholders to gather feedback on the white paper for evaluation and input after the presentation.

Leadership and Change

An effective leader in curriculum, instruction and assessment (CIA) must build and sustain a student-centered culture that is dynamic, data-ready and a staff that is data-wise (Bianco, 2010; Depka, 2006; Holcomb, 2004; Love, 2009,). To build a data culture,

CIA leaders need to begin change from student-focused dialogue, raise interest in inquiry, and foster student-centered collaboration. The use of student data as the basis for collaborative inquiry has been shown to improve academic results for all students (Bianco, 2010; Kronholz, 2012; Love, 2009; Pella, 2012). Effective site and district CIA leaders gather data to initiate the change process to support high achievement for all learners, successfully foster collaborative inquiry, and remove obstacles to the ongoing support of a data culture.

Some of the goals of the formative evaluation and white paper were to provide data as the impetus for student-centered inquiry, provide recommendations toward improvement, and establish a system for progress monitoring of DL student data. By approaching problem-solving though the systematic use of inquiry, CIA leaders model a research-based practice that can affect dramatic results when used in the classroom (Bianco, 2010; Kronholz, 2012; Love, 2009; Pella, 2012).

Analysis of Self as Scholar

In reflection and analysis of myself as a scholar, my strength is in the research process. I completed undergraduate research in science and produced two publications. As a scientist, I was familiar with quantitative study design and methodology and I preferred empirical data. As an educator I learned to use policy and practices for guidelines, but look at students and situation individually. A wise colleague taught me about the value of including student and stakeholder voice when gathering program data. Despite my inexperience with and initial distrust of qualitative data, I chose a mixed

methods study as a result of that learning lesson. Although it probably took longer to complete, I consider the mixed method design to be a strength of the study.

Completing the literature review has greatly expanded my knowledge of DL programs and practices. I have read over 200 articles on DL and college readiness. Although it is difficult to see myself as "an expert" as in the definition of a scholar, I do feel more confident in my understanding of the underlying framework, pedagogy, and application of dual language.

Analysis of Self as Practitioner

My doctoral experience at Walden has strengthened my skills as an educator. The theoretical foundation provided in the coursework and application of skills in the doctoral study made the data collection and continuous improvement cycles part of my everyday practice. As I learned more about the role of CIA leaders in the change process I applied that knowledge as a change agent at the site and district levels. Moreover, writing the literature review and the positive study results affirmed my motivation and dedication to closing the achievement and providing equity of opportunity and preparation to all students.

Analysis of Self as Project Developer

In a doctoral study, the role of project developer is to both create the product and handle tasks that move the project forward. The decision to build on prior knowledge and to choose the topics that interested me the most- dual language and college readiness- helped me to keep focus and motivation. The choices in topics and project genre (program evaluation) are also in alignment with the district practices, vision, and mission

thereby facilitating buy-in for the project. An unanticipated difficulty was to balance getting the data from the district in a timely manner and avoiding the creation of additional work for my colleagues.

The steps to project completion seemed unclear at times. I learned to use the university planning tools and resources to look ahead and anticipate difficulties. It was helpful to print the semester plan each semester and keep copies at work and home to use for reference to keep the project moving forward. My chairs were excellent resources and provided tireless support. The most prudent lesson I learned was to follow the template and rubric with fidelity in a scripted, formulaic style. As a result my writing became more concise and logical. The greatest difficulty by far was finding the time necessary to dedicate to the project- a challenge I am confident all doctoral candidates find ways to overcome.

The Project's Potential Impact on Social Change

Latino students, including those who are of EL status, are at-risk for academic under preparedness, academic underachievement and dropping out of school, and have lower college acceptance and completion rates (Boden, 2011; Lindholm-Leary & Block, 2010; Lindholm-Leary & Hernández, 2011; Martinez et al., 2013); these factors limit opportunities for increasing social and an educated citizenry. The growing Latino and EL student populations make it urgent for schools to create positive social change by implementing effective programs to prepare students for the increasing demands of universities and the workplace. The study demonstrated that DL students were achieving at the same or higher level as their EI counter parts. It is important to acknowledge that

in addition to the rigorous coursework and high levels of preparation, the DL students are leaving high school with the additional 21st skills of bilingualism, biliteracy, and biculturalism.

The white paper from the project study could benefit students, the district, and the local community because the paper addressed specific recommendations for the DL program based on the data findings. The district could implement one or more of the suggestions in the white paper thereby raising student achievement and college readiness, creating opportunities for more students, and bringing about social change. In addition, the study provides validation for the teachers, administrators, and parents of the DL program that the work they are doing is having a positive impact on student achievement.

Implications, Applications, and Directions for Future Research

The project study provided new information about dual language and college readiness in a format that had neither been addressed in local practice nor in the literature. The project made research-based recommendations to address the local achievement gap and improve the quality of the DL program. The sample sizes for the transcript study and interviews were small, but each piece of data is relevant information that can be used for district program improvement.

Future research could repeat the study format with more cohort data and interview participants. Another approach would be to do a similar transcript study with high school DL data from various districts to see if the study trends are seen in other programs. A study that combined years of transcript data from many DL programs would allow for more confident generalized statements to be made about the effects of

DL on college readiness levels. This information would be helpful to districts nationwide as elementary DL programs become more and more popular.

Conclusion

Section 4 of the project study discusses the formative program evaluation and white paper including projects strengths, limitations, scholarship, and a description of the project development and evaluation. In addition, the section includes reflections on scholarship, leadership and change, and my role as a scholar-practitioner. The section discussed the possible ways the project may bring social change well as the implications, applications, and directions for future research. .

References

Achieve Inc., National Association of Secondary School Principals, & National Association of Elementary School Principals. (2012). *Implementing the Common Core State Standards: The Role of the Secondary School Leader*. Achieve, Inc. Retrieved from: http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED540456&scope=site

ACT, (2012). The Condition of College & Career Readiness, 2012: California. Retrieved from: http://www.act.org/newsroom/data/2012/states/pdf/California.pdf

ACT, (2013). Why go to college. Retrieved from http://www.actstudent.org/college/

Alanís, I. (2013). Where's Your Partner? Pairing Bilingual Learners in Preschool and Primary Grade Dual Language Classrooms. *YC: Young Children*, *68*(1), 42–46.

Alanís, I., & Rodríguez, M. A. (2008). Sustaining a dual language immersion program: Features of success. *Journal of Latinos and Education*, *7*(4), 305–319.

Allison, C. R. (2010). Effective English language learner strategies which enable teachers to successfully improve student academic achievement. *Language Learning*, *66*(16).

Balfanz, R., Bridgeland, J. M., Bruce, M., & Fox, J. H. (2012). Building a Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic. Annual Update, 2012. *Civic Enterprises*.

Ballinger, S., & Lyster, R. (2011). Student and Teacher Oral Language Use in a Two-Way Spanish/English Immersion School. *Language Teaching Research*, *15*(3), 289–306.

Barnes, W. B., & Slate, J. R. (2013). College-readiness is not one-size-fits-all. *Current Issues in Education, 16*(1).

Bearse, C., & de Jong, E. J. (2008). Cultural and Linguistic Investment: Adolescents in a Secondary Two-Way Immersion Program. *Equity & Excellence in Education*, *41*(3), 325–340.

Bianco, S. D. (2010). Improving Student Outcomes: Data-Driven Instruction and Fidelity of Implementation in a Response to Intervention (RTI) Model. *TEACHING Exceptional Children Plus*, *6*(5). Retrieved from http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ907036&scope=site

Block, N. (2011a). The Impact of Two-Way Dual-Immersion Programs on Initially English-Dominant Latino Students' Attitudes. *Bilingual Research Journal, 34*(2), 125–141. doi:10.1080/15235882.2011.598059.

Block, N. C. (2011b). Perceived impact of two-way dual immersion programs on Latino students' relationships in their families and communities. International Journal of Bilingual Education and Bilingualism, 15(2), 235–257. doi:10.1080/13670050.2011.620079

Boboc, M., & Nordgren, R. D. (2013). Improving Urban Students' College Readiness as a Driver of High School Curriculum Enhancement. *Enhancing Education: Attending to the Four Commonplaces*, 43.

Boden, K. (2011). Perceived Academic Preparedness of First-Generation Latino College Students. *Journal of Hispanic Higher Education*, *10*(2), 96–106.

Buysse, V., Castro, D. C., & Peisner-Feinberg, E. (2010). Effects of a professional development program on classroom practices and outcomes for Latino dual language learners. *Early Childhood Research Quarterly, 25*(2), 194–206. doi:10.1016/j.ecresq.2009.10.001.

California Department of Education (2012).STAR results. Retrieved from http://star.cde.ca.gov/

California Department of Education (2013a). Standardized Testing and Reporting Program. Retrieved from http://www.startest.org/cst.html

California Department of Education (2013b). CELDT Frequently asked questions. Retrieved from http://www.cde.ca.gov/ta/tg/el/

California Department of Education, (2013c). Executive summary explaining the academic performance index. Prepared by the Analysis, Measurement, and Accountability Reporting Division California Department of Education. Retrieved from http://www.cde.ca.gov/ta/ac/ap/documents/apiexecsummary.pdf

Carnevale, A. P., Jayasundera, T., & Cheah, B. (2012). The College Advantage: Weathering the Economic Storm. Georgetown University Center on Education and the Workforce. Washington, DC. Retrieved from http://www.eric.ed.gov/ERICWebPortal/detail?accno=ED534454

Castillo, R. I., & Sanders, J. (2013). The Impact of the Dual Language and Transitional Bilingual Programs on the Texas Assessment of Knowledge and Skills. *Journal of Border Educational Research, 4*(1).

Castro, D. C., Páez, M. M., Dickinson, D. K., & Frede, E. (2011). Promoting Language

and Literacy in Young Dual Language Learners: Research, Practice, and Policy. *Child Development Perspectives*, *5*(1), 15–21.

Cates, J. T., & Schaefle, S. E. (2011). The Relationship between a College Preparation Program and At-Risk Students' College Readiness. *Journal of Latinos and Education*, *10*(4), 320–334.

Callahan, R., Wilkinson, L., & Muller, C. (2010). Academic Achievement and Course Taking Among Language Minority Youth in U.S. Schools: Effects of ESL Placement. *Educational Evaluation and Policy Analysis*, *32*(1), 84–117. doi:10.3102/0162373709359805

Chan, R. Y. (2012). College Readiness and Remediation in Higher Education A Policy Brief of California Community Colleges among Hispanic/Latino Undergraduate Students in American Society.

Chapman, C., Laird, J., & KewalRamani, A. (2013). *Trends in high school dropout and completion rates in the United States: 1972-2009*. BiblioGov. National Center for Education Statistics.

Chomsky, N. (1972). *Language and mind*. New York: Harcourt Brace Jovanovich.

Chomsky, N. (2005). Three factors in language design. *Linguistic Inquiry*, *36*(1), 1–22.

College Board, (2013a). The AP experience. Retrieved from https://apstudent.collegeboard.org/exploreap/the-ap-experience

College Board, (2013b). Your SAT today. Retrieved from http://sat.collegeboard.org/home

Collier, V. P., & Thomas, W. P. (2004). The astounding effectiveness of dual language education for all. *NABE Journal of Research and practice, 2*(1), 1–20.

Creswell, J.W. (2012). Educational research: Planning conducting and evaluating quantitative and qualitative research (Laureate custom ed.). Boston, MA: Pearson Education, Inc.

Cummins, J. (1983). Bilingualism and Special Education: Issues in assessment and pedagogy. San Diego, CA: Collage-Geo Press.

Cummins, J. (1980). The construct of language proficiency in bilingual education. *Current issues in bilingual education*, 81-103.

de Jong, E. J. (2011). *Foundations for multilingualism in education: From principles to practice*. Caslon Pub..

de Jong, E. J. (2013). Policy Discourses and U.S. Language in Education Policies. *Peabody Journal of Education, 88*(1), 98–111. doi:10.1080/0161956X.2013.752310

de Jong, E. J., & Bearse, C. I. (2014) Dual language programs as a strand within a secondary school: dilemmas of school organization and the TWI mission, *International Journal of Bilingual Education and Bilingualism*, 17:1, 15-31. DOI: 10.1080/13670050.2012.725709

de Jong, E. J., & Bearse, C. I. (2011). The same outcomes for all? High school students reflect on their two-way immersion program experiences. *Immersion education: Practices, policies, possibilities*, 104-122.

Del Carmen Salazar, M. (2008). English or Nothing: The Impact of Rigid Language Policies on the Inclusion of Humanizing Practices in a High School ESL Program. *Equity & Excellence in Education*, *41*(3), 341–356. doi:10.1080/10665680802174783

Depka, E. (2006). *The data guidebook for teachers and leaders: Tools for continuous improvement.* Thousand Oaks, CA: Corwin Press.

Epstein, J.L., Coates, L., Salinas, K.C., Sanders, M.G., & Simon, B.S. (1997). *School, Family, and Community Partnerships: Your Handbook for Action*. Thousand Oaks, CA: Corwin Press.

Epstein, J. L., & Dauber, S. L. (1991). School programs and teacher practices of parent involvement in inner-city elementary and middle schools. *The Elementary School Journal*, 289-305.

Epstein, J. L. (1986). Parent involvement: Implications for limited English proficient parents. In C.Smith-Dudgeon (Ed.), *Issues of parent involvement and literacy* (pp. 6–16). Washington, DC: Trinity College.

Finkelstein, N. D., & Fong, A. B. (2008). *Course-Taking Patterns and Preparation for Postsecondary Education in California's Public University Systems among Minority Youth. Issues & Answers. REL 2008-No. 035*. Regional Educational Laboratory West.

Friedline, T., Elliott, W., & Nam, I. (2013). Small-dollar children's saving accounts and children's college outcomes by race. Children and Youth Services Review, 35(3), 548–559. doi:10.1016/j.childyouth.2012.12.007.

Genesee, F., Lindholm-Leary, K., Saunders, W., & Christian, D. (2005). English language learners in US schools: An overview of research findings. *Journal of Education for Students Placed at Risk*, *10*(4), 363-385.

Gerena, L. (2010). Student Attitudes toward Biliteracy in a Dual Immersion Program. *Reading Matrix: An International Online Journal*, *10*(1), 55–78.

Good, M. E., Masewicz, S., & Vogel, L. (2010). Latino English Language Learners: Bridging Achievement and Cultural Gaps between Schools and Families. *Journal of Latinos and Education*, *9*(4), 321–339.

Harper, C. A., De Jong, E. J., & Platt, E. J. (2008). Marginalizing English as a second language teacher expertise: The exclusionary consequence of No Child Left Behind. *Language Policy*, *7*(3), 267–284.

Holcomb, E. L. (2004). *Getting excited about data: Combining people, passion, and proof to maximize student achievement* (2nd ed.). Thousand Oaks, CA: Corwin Press.

Howard, E. R., Lindholm-Leary, K. J., Sugarman, J., Christian, D., & Rogers, D. (2007). *Guiding principles for dual language education*. Washington, DC: Center for Applied Linguistics.

Jimenez-Castellanos, O. (2012). School finance and English language learners: A legislative perspective. *Association of Mexican American Educators Journal*,*4*(1).

Johnson, D. C. (2010). The Relationship between Applied Linguistic Research and Language Policy for Bilingual Education1. *Applied Linguistics*, *31*(1), 72–93.

Johnson-Sheehan, R. (2010). Technical communication today (3rd ed.). New York, NY: Longman.

Kiely, R. (2009). Small answers to the big question: Learning from language programme evaluation. *Language Teaching Research*, *13*(1), 99-116.

Kober, N., & Center on Education Policy. (2010). *Improving Achievement for the Growing Latino Population Is Critical to the Nation's Future. Student Achievement Policy Brief #3: Latino Students*. Center on Education Policy. Retrieved from http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED513299&site=eds-live&scope=site

Krashen, S. (1982). *Principles and practice in second language acquisition* (pp. 65-78). Oxford, England: Pergamon.

Krashen, S., (1991). Bilingual Education: A Focus on Current Research. Occasional Papers in Bilingual Education, Number 3. National Clearinghouse for Bilingual Education.

Kronholz, J. (2012). Teaching the Teachers. *Education Next*, *12*(3), 8–15.

Lee, J. O., Hill, K. G., & Hawkins, J. D. (2012). The Role of Educational Aspirations and Expectations in the Discontinuity of Intergenerational Low-Income Status. *Social Work Research*, *36*(2), 141–151.

Leonard, Jack. (2013). Maximizing College Readiness for All through Parental Support. *School Community Journal*, *23*(1), 182–202.

Lindholm-Leary, K. (2012). Success And Challenges In Dual Language Education. *Theory Into Practice*, *51*(4), 256–262. doi:10.1080/00405841.2012.726053

Lindholm-Leary, K. J. (2005). The rich promise of two-way immersion. *Educational Leadership*, *62*(4), 56–59.

Lindholm-Leary, K., & Block, N. (2010). Achievement in predominantly low SES/Hispanic dual language schools. *International Journal of Bilingual Education and Bilingualism*, *13*(13-60).

Lindholm-Leary, K., & Borsato, G. (2002). Impact of Two-Way Immersion on Students' Attitudes toward School and College. ERIC Digest.

Lindholm-Leary, K., & Borsato, G. (2005). Hispanic high schoolers and mathematics: Follow-up of students who had participated in two-way bilingual elementary programs. *Bilingual Research Journal*, *29*(3), 641-652.

Lindholm-Leary, K., & Hernández, A. (2011). Achievement and language proficiency of Latino students in dual language programmes: Native English speakers, fluent English/previous ELLs, and current ELLs. *Journal of Multilingual and Multicultural Development*, *32*(6), 531-545.

Lodico, M., Spaulding, D., & Voegtle, K. (2010). Methods in educational research: From

theory to practice. (Laureate Education, Inc., custom ed.) San Francisco: John Wiley & Sons.

Lombardi, A. R., Conley, D. T., Seburn, M. A., & Downs, A. M. (2013). College and Career Readiness Assessment: Validation of the Key Cognitive Strategies Framework. *Assessment for Effective Intervention*, *38*(3), 163–171. doi:10.1177/1534508412448668

Lopez, M. P. (2004). Reflections on educating Latino and Latina undocumented children: Beyond Plyler v. Doe. *Seton Hall Literature Review*.

Love, N. (2008). *Using data to improve learning for all: A collaborative inquiry approach*. Corwin Press.

Martinez, M. A., Cortez, L. J., & Saenz, V. B. (2013). Latino Parents' Perceptions of the Role of Schools in College Readiness. *Journal of Latinos and Education*, *12*(2), 108-120.

Moll, L. C. (2010). Mobilizing Culture, Language, and Educational Practices: Fulfilling the Promises of Mendez and Brown. *Educational Researcher, 39*(6), 451–460. doi:10.3102/0013189X10380654

Montone, C. L., & Loeb, M. I. (2000). Implementing two-way immersion programs in secondary schools. Center for Research on Education, Diversity & Excellence.

Morren López, M. (2012). Children's language ideologies in a first-grade dual-language class. *Journal of Early Childhood Literacy*, *12*(2), 176–201. doi:10.1177/1468798411417077.

National Center for Educational Statistics (2014). *High school transcripts studies.*

Retrieved January 2, 2014 from http://nces.ed.gov/surveys/hst/

National Center for Education Statistics (2010).

Data Stewardship: Managing Personally Identifiable Information in Electronic Student Education Records. Retrieved January 4, 2015 from http://nces.ed.gov/pubs2011/2011602.pdf

Norris, J. M. (2009). Understanding and improving language education through program evaluation: Introduction to the special issue. *Language Teaching Research*, *13*(1), 7-13.

Paciotto, C., & Delany-Barmann, G. (2011). Planning Micro-Level Language Education Reform in New Diaspora Sites: Two-Way Immersion Education in the Rural Midwest. *Language Policy*, *10*(3), 221–243.

Pella, S. (2012). What Should Count as Data for Data-Driven Instruction? Toward Contextualized Data-Inquiry Models for Teacher Education and Professional Development. *Middle Grades Research Journal*, *7*(1), 57–75.

Petrzela, N. M. (2010). Before the Federal Bilingual Education Act: Legislation and Lived Experience in California. *Peabody Journal of Education*, *85*(4), 406–424. doi:10.1080/0161956X.2010.518021

Olson, L. E. (2010). Developing a framework for assessing responsible conduct of research education programs. *Science And Engineering Ethics*, *16*(1), 185–200. doi:10.1007/s11948-010-9196-4

Pimentel, C. (2011). The Color of Language: The Racialized Educational Trajectory of

an Emerging Bilingual Student. *Journal of Latinos and Education*, *10*(4), 335–353.

Powell, C. (2000, July). Address to Republican National Convention. Philadelphia, Pennsylvania. Retrieved from: http://www.npr.org/news/national/election2000/conventions/speech.powell.html

Ray, J. M. (2009). A Template Analysis of Teacher Agency at an Academically Successful Dual Language School. *Journal of Advanced Academics*, *21*(1), 110–141,159.

Rosenthal, R., & Jacobson, L. (1968). Pygmalion in the classroom. *The Urban Review*, *3*(1), 16-20.

Rouse, C.E. (2007). Quantifying the Costs of Inadequate Education: Consequences of the Labor Market. In C.R. Belfield and H.M. Levin (Eds.), *The Price We Pay: and Social Consequences of Inadequate Education* (pp. 99-124). Washington, DC: Brookings Institution Press.

Ryan, C. S., Casas, J. F., Kelly-Vance, L., Ryalls, B. O., & Nero, C. (2010). Parent Involvement and Views of School Success: The Role of Parents' Latino and White American Cultural Orientations. *Psychology in the Schools*, *47*(4), 391–405.

Saunders, W. M., & Marcelletti, D. J. (2013). The Gap That Can't Go Away: The Catch-22 of Reclassification in Monitoring the Progress of English Learners. *Educational Evaluation and Policy Analysis*, *35*(2), 139–156. doi:10.3102/0162373712461849

Schneider, M., & Yin, L. M. (2011). The high cost of low graduation rates: How much does dropping out of college really cost? *Washington, DC: American Institutes for Research.*

Smith, M. D., & Rodriguez, A. (2011). A Critical Foundation for Bilingual Education. *Journal for Critical Education Policy Studies*, *9*(2), 186–198.

Soderman, A. K., & Oshio, T. (2008). The social and cultural contexts of second language acquisition in young children. *European Early Childhood Education Research Journal*, *16*(3), 297–311.

Spaulding, D. T. (2008). *Program evaluation in practice: Core concepts and examples for discussion and analysis.* San Francisco: Jossey-Bass.

Stelzner, M. A. (2006). *Writing white papers: How to capture readers and keep them engaged*. Poway, CA: WhitePaperSource.

Teddlie, C., & Yu, F. (2007). Mixed methods sampling a typology with examples. *Journal of Mixed Methods Research*, *1*(1), 77–100.

Thomas, W. P., & Collier, V. (1997). School Effectiveness for Language Minority Students. NCBE Resource Collection Series, No. 9.

Valdés, G. (2011). Dual-language immersion programs: A cautionary note concerning the education of language minority students. *Research and Practice in Immersion Education*.

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, 34-41.

US Department of Education, (2001). *No Child Left Behind.* Retrieved from: http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf

Western Association of Colleges and Schools, (2014). Directory. Retrieved from: http://www.acswasc.org/directory_searchlist.cfm

Willerton, R. (2013). Teaching White Papers Through Client Projects. *Business Communication Quarterly*, *76*(1), 105–113.

Woolley, M. E., Kol, K. L., & Bowen, G. L. (2009). The Social Context of School Success for Latino Middle School Students: Direct and Indirect Influences of Teachers, Family, and Friends. *The Journal of Early Adolescence*, *29*(1), 43–70. doi:10.1177/0272431608324478

Worthen, B. R., Sanders, J. R., & Fitzpatrick, J. L. (1997). *Program evaluation*. Longman.

Yamamura, E. K., Martinez, M. A., & Saenz, V. B. (2010). Moving Beyond High School Expectations: Examining Stakeholders' Responsibility for Increasing Latina/o Students' College Readiness. *High School Journal*, *93*(3), 126–148.

Yong Zhao. (2012). Mass Localism for Improving America's Education. *Kappa Delta Pi Record*, *48*(1), 17–22.

Zohrabi, M. (2011). An Introduction to Course and/or Program Evaluation. *Journal of Pan-Pacific Association of Applied Linguistics*, *15*(2), 59–70.

Appendix A: White Paper

The Effects of Dual Language on Student College Readiness Levels

Danielle Cortes

Walden University

Table Of Contents

References 12

Introduction

A review of the state accountability assessment data in [local school district] demonstrated that the district is not meeting federal No Child Left Behind (NCLB) accountability targets for student achievement in all demographic groups (California Department of Education, 2013). In addition, there is a significant and persistent achievement gap between demographic groups based on varying socioeconomic status levels and racial groups with White students consistently outperforming Latino students and English Learner (EL) students.

According to the California Department of Education (2013), approximately 17,500 pre-K-12 students are enrolled in the district's 38 schools. The two major demographic groups are Latino (47.1%) and Caucasian (44.1%). While 22% of the population is EL students, 60% of students receive free/reduced lunch. When the population for each of the district demographic groups is taken into consideration, NCLB accountability scores demonstrate that less than half of the district's students are achieving at the proficient level. Furthermore, less than 35% of students' district-wide are classified as "college ready" by the California university systems (California Department of Education, 2012).

The large Latino, socioeconomically disadvantaged, and EL populations are a growing group of "at-risk" students with diverse learning needs including the need for language acquisition support. Although there are a variety of languages spoken, the predominant primary language of EL students in the district is Spanish. To meet the needs of these EL students, the district offers a structured English immersion program, an early-exit transitional Spanish bilingual program, and two different dual language (DL) Spanish programs. Dual language programs help close the achievement gap between Latino and White students (Lindholm-Leary & Block, 2010), increase achievement and motivation, and help students form positive attitudes toward college (Lindholm-Leary & Borsato, 2005).

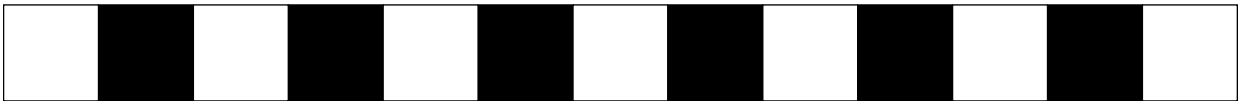
Purpose

The purpose of the study is to examine whether or not DL instruction has affected the college readiness rates of local DL students of varying demographic characteristics including race/ethnicity, EL status, and SES status. Data were collected from student transcripts including grade point average (GPA), ACT/SAT scores, coursework towards University of California a-g requirements, and Advanced Placement (AP) coursework. The study informs local school practices and help to develop policies to offer the most effective programs for EL and Latino students, and can also help identify which language program better prepares students for the challenges of college and careers. The implications of the study could support the expansion of successful programs to help meet the needs of Latino and EL students. Supporting the academic success of Latino and EL students is of great concern for educators and should be of utmost importance for all stakeholders and taxpayers. The growing Latino and EL student populations make it important for school districts to create positive social change by implementing effective programs to prepare students for the increasing demands of universities and the workplace.

Program Description

In 1998, the sociopolitical climate and passage of Proposition 227 in California significantly hindered the ability of school districts to provide primary language instruction for English Learner students (Johnson, 2010). At the same time, researchers, Thomas and Collier (1997) published their fundamental study asserting that EL students in a dual language (DL) instructional program academically outperform EL students in English-Only programs (EO) when long-term results are examined. Despite the anti-bilingual education sociopolitical climate and educational policy in California in 1999, the [local school district] responded by implementing its first DL program. The district currently offers a structured English immersion program, an early-exit transitional Spanish bilingual program, and two different dual language Spanish programs to meet the needs of their diverse EL students.

In 2000, the district established a 90:10 ratio of Spanish to English DL strand in kindergarten at [dual language] elementary school to provide a rigorous instructional program designed to support all students. The three stated goals of the program and all DL programs are: bilingualism and biliteracy, high academic achievement in both languages, and cultural proficiency in two or more cultures (Bearse & de Jong, 2008; Castillo & Sanders, 2013; Lindholm-Leary, 2012). The [dual language] elementary school offers a 90:10 Spanish: English program. In this model, the kindergarten classes are composed of half English-only speaking students and half EL or bilingual Spanish-speaking students. Instruction in kindergarten is 90% Spanish: 10% English. There is a gradual increase in English instruction until a 50:50 balance is established in 5th grade (Castillo & Sanders, 2013). Students continue in DL instruction through [dual language] middle school and [dual language] high school ensuring the K-12 opportunity to achieve fluency in both languages. The dual language program is centered at one of the district's two comprehensive high schools. There was no "official" DL high school, however, when the first DL cohort (the 2013 graduating class) entered high school as the designation came when these students were sophomores.



Literature Review

Although the majority of White students in California graduate high school (94.7%), the graduation rate for Latino students is significantly lower at 69.3% (Boden, 2011). Among those students who graduate, there is a gap between the UC a-g college readiness rates for White students (36%) and Latino students (25%) (Boden, 2011). The increasing Latino and EL student populations in the local, state, and nationwide settings (California Department of Education, 2012; Block, 2011a; Block, 2011b; Boden, 2011) are at-risk for under preparation for college and careers (Boden, 2011), and are more likely to suffer the financial life consequences of a lack of secondary education (Carnevale, Jayasundera, & Cheah, 2012).

In addition to the gap in graduation rates between Whites and Latinos among those students who graduate, there is also a gap in the UC a-g college readiness rates (Boden, 2011). The increasing Latino and EL student populations in the local, state, and nationwide settings (CDE, 2012; Block, 2011a; Block, 2011b; Boden, 2011) are at-risk for under preparation for college and careers and consequently, are more likely to suffer the financial life consequences of a lack of secondary education (Buysse, Castro, & Peisner-Feinberg, 2010; Cates, & Schaefle, 2011). These financial effects of under-education, in addition to the hardship on individual families, also impact the national economy. According to Schneider and Yin (2011), college students, who entered in 2002 but never graduated, cost the country $3.8 billion in lost income and $730 million in taxes (2011). According to Schneider and Yin (2011), the lack of a college degree costs one year's cohort of students close to $390 million per year in California alone. The completion of a college education has become central to the economic growth of American society (Chan, 2012).

A promising program model, that has demonstrated evidence of decreased high school dropout rates for Latinos, is the dual language model (Lindholm-Leary & Borsato, 2005). Dual language (DL) programs integrate native English speakers and EL students in classrooms that provide instruction in both English and the native language of the EL students (Paciotto & Delany-Barmann, 2011; Collier & Thomas, 2004). Dual language programs increase student academic performance and attitudes toward college (Collier, & Thomas, 2004; Lindholm-Leary, 2012). The purpose of the study is to determine if DL programs also increase college readiness levels to better prepare EL and Latino students for college and careers.

Definitions

Advanced Placement (AP) - A College Board program that provides college-level coursework and college credit by examination for high school students (College Board, 2013).
ACT- A set of college-readiness achievement tests used for college admissions (ACT, 2013).
Bilingual education-The overarching term for programs which use primary language instruction (Castillo & Sanders, 2013).
California English Language Development Test (CELDT) - The exam is used to determine annual growth and is an indicator used to consider reclassification of EL students to Reclassified Fluent English Proficient (RFEP) (California Department of Education (CDE), 2013b).
College ready- the attainment of the skills needed to be successful credit-bearing first-year courses at a postsecondary institution without remediation (ACT, 2013).
Dual Language (DL)-"any program that provides literacy and content instruction to all students through two languages and that promotes bilingualism and biliteracy, grade-level academic achievement, and multicultural competence for all students" (Howard, Lindholm-Leary, Sugarman, Christian, & Rogers, 2007, p.1).
English Learner (EL)-A student whose home language survey upon enrollment indicated a language other than English and whose initial CELDT exam score was not at the proficient level. Students who are classified as EL have not met English proficiency indicators (CDE, 2013b)
English Only (EO) - a student whose initial California school registration form did not list a language other than English on the home language survey (Saunders & Marcelletti, 2013).
Initial English Learners (IEL) - Designation that includes both EL and RFEP students (Saunders & Marcelletti, 2013).
Initially Fluent English Proficient (IFEP) - A student whose initial California school registration form had a language other than English listed in the home language survey and who had "Advanced" on their initial CELDT. IFEPS are not EL nor are they EO (Saunders & Marcelletti, 2013).
Primary language -the language spoken from birth or spoken the best (Krashen, 1982).
Reclassified Fluent English Proficient (RFEP)-Former EL students who meet district and state criteria for English proficiency (Saunders & Marcelletti, 2013).
SAT -A set of college-readiness achievement tests used for college admissions published by College Board (College Board, 2013b).
Two-Way Immersion (TWI)- A bilingual program that integrates native English speakers and native speakers of a minority language, uses both languages for instruction, and aims for high levels of bilingualism, biliteracy, and cultural proficiency (Bearse & de Jong, 2008).
University of California a-g requirements (UC a-g) - Core curriculum required by the UC and CSU systems for eligibility for admissions (Boden, 2011). Students who meet these requirements with a grade of "C" or higher are deemed *college-ready* by the California university systems.

The Study

There are two central research questions for the study. First, when measuring college readiness, what differences are seen between Initial English Learners (IEL) students in a DL program when compared to IEL students in English immersion? Second, how do students (over age 18), teachers, and parents describe their perceptions of the effects of a K-12 DL on student college readiness? The null (H0) hypothesis is that there is no statistical significant difference between the college readiness level of DL and EI students. The alternate hypothesis is that there is a statistically significant difference between the college readiness levels of DL and EI students and that the impact of the DL program is positive.

Quantitative data were collected first to determine any statistical differences between the academic achievement and college readiness indicators for the DL and English Immersion (EI) groups. Transcript data collected includes GPA, UC a-g courses, AP courses, AP tests, ACT, and SAT. The emerging data provided the framework for the development of interview questions that were sufficient to gather complementary qualitative data. A mixed methods explanatory sequential or two-phase design was an appropriate choice for the study because the empirical data first provided the assessment results for student achievement and college readiness. Next, the qualitative data obtained from the interviews with students, staff, and a parent provided more personal and detailed data, extended the findings, and helped in the interpretation and explanation of the quantitative results.

The study design is appropriate and in alignment with Creswell's (2012) description of sequential explanatory mixed methods design because the qualitative interview was designed based on the quantitative results and helped support and explain the quantitative findings. The quantitative transcript data provided the general picture of the problem and the qualitative interview data helped refine and explain the general picture (Creswell, 2012). The final product for the project study is a formative program evaluation with the presentation of this white paper that includes recommendations for future practices.

A formative evaluation allows the stakeholders to see the program's areas of strengths and needed improvement while evaluating program data as a whole (Lodico et al., 2010). The goal of the formative program evaluation study is multifold:

1) to assess the academic achievement results and college-readiness indicators of program participants

2) to provide areas for program improvement and expansion and

3) to provide information for decisions regarding the program.

A formative evaluation was appropriate because the high school DL program has not yet been evaluated and the goal is to improve the program based on the data collected.

Student Transcript Results

Table 1 *Demographic Data of Dual Language (DL) and their "Matched" English Immersion (EI) Participants in Comparison with School Population*

Variables	Levels	*n*	% of Participants	% of School '13 and '14
Graduating Class	2013 2014	6 5	55 45	52 48
Ethnicity	Latino White Other	7 4 0	64 36 0	49 45 6
Language Status	English Only English Learner Reclassified English Proficient Initial Fluent English Proficient IEL (EL + RFEP)	5 0 5 1 5	45 0 45 10 45	65 3 28 3 31
Free/Reduced Lunch Status	Qualifies Free/Reduced Lunch Does Not Qualify	7 4	64 36	41 59
Gifted and Talented Status	Qualifies for GATE Does Not Qualify	2 9	18 82	26 74
Parent Education Levels	Not a High School Graduate High School Graduate Some College College Graduate Post Graduate Declined to State	2 2 0 4 3 0	18 18 0 36 27 0	23 14 23 22 18 1

The demographics of the DL cohorts of 2013 and 2014 showed that the DL cohort had more "at-risk" factors when compared to the non DL cohorts of the same years. The DL cohort had more Latino students, (64 % versus 49%), less English only students (55% versus 65%), more students of poverty (64% versus 41%) and less GATE identified students (18% versus 26 %). With regard to parent reported lower levels of formal education, both the DL and non DL cohorts were the same with 63% reporting "some College" or high levels of education (Table 1).

Student Transcript Results (continued)

The transcript study demonstrated that Initial English Learner (IEL) Dual Language students had higher means on all indicators except ACT score, passed statistically more AP courses, and took statistically more AP exams than the IEL students who participated in the EI program. Dual language IELs and DL Latinos were statistically more likely to participate in AP courses and tests and had higher means on many indicators than their non DL counterparts. Whereas statistically significant achievement gaps were found in the EI student population, there was no statistical achievement gap between EO DL and IEL Latino DL students, White DL students and Latino DL students, nor between Latino DL and White EI students (with the exception of ACT score where White EI students scored statistically higher). Dual language Latino students had higher means than DL White students on UC a-g courses, SAT participation, and SAT combined score. White DL students scored statistically the same as White EI students.

Table 2

Dual Language Initial English Learner (DL IEL) Compared to English Immersion Initial English Learner (EI IEL)

College Readiness Variable	Language Program	*n*	*M*	*SD*	*SEM*
GPA	DL	5	3.25	0.46	0.21
	EI	5	2.49	0.93	0.42
UC a-g courses	DL	5	30.80	4.15	1.85
	EI	5	21.20	15.06	6.73
AP Participation	DL	5	0.80	0.45	0.20
	EI	5	0.20	0.45	0.20
Total AP courses	DL	5	1.20	0.84	0.37
	EI	5	0.20	0.45	0.20
Non-Spanish AP	DL	5	0.20	0.45	0.20
	EI	5	0.00	0.00	0.00
Total AP Tests	DL	5	1.00	0.71	0.32
	EI	5	0.00	0.00	0.00
AP Tests Passed	DL	5	0.20	0.45	0.20
	EI	5	0.00	0.00	0.00
SAT Participation	DL	5	0.60	0.55	0.24
	EI	5	0.40	0.55	0.24
SAT Score	DL	5	656.00	603.89	270.07
	EI	5	576.00	795.82	355.90
ACT Participation	DL	5	0.60	0.55	0.24
	EI	5	0.20	0.45	0.20
ACT Score	DL	3	15.00	1.732	1.00
	EI	1	19.00	.	.

Interviews: Students, Parent, and Staff

"I definitely want to reiterate that I thought the Two-Way Immersion Program was a great experience. I am glad see that...more schools are adopting it now in [the local school district.]"-TWI student class of 2013

"I felt he was very prepared for college because of the number of Advanced Placement courses he took." -TWI parent class of 2013

"I was expected to go off to a four year university and probably study politics and Spanish, so I think it's gone just as expected and I've been pleased with my, uh, college experiences so far."

TWI student – Class of 2013

It is important to recognize that in addition to the rigorous coursework and levels of preparation commensurate to their EI counterparts, the DL students are leaving high school with the additional skills of bilingualism, biliteracy, and biculturalism, which was reiterated in the parent, teacher, and student interviews.

Themes of high expectations, rigorous coursework, and parent involvement also emerged from the qualitative data. Interview participants reported perceived positive effects of the DL program on student college readiness levels complementing the quantitative study's positive findings.

Two opportunities for improvement that came out of the data were (a) the offering of more content courses with Spanish Language instruction and (b) to ensure that DL students are clearly marked in the district record system.

Recommendations:

-Continue to hold ***high expectations*** for all students and to clearly communicate those expectations to stakeholders for the benefit of student achievement.

-Build on ***parent involvement*** in both the DL and EI programs so that students, parents, and staff reap the benefits of strong home-school connections. Continue to inform parents of the steps toward student college readiness through programs like PIQE.

-Add more ***content courses in Spanish including honors and AP courses*** to bring the program into alignment with the research-based model.

-***Clearly identify*** DL students in the student data management system.

-***Incorporate DL student data*** into continuous improvement cycle as part of a culture of data including the WASC accreditation cycle.

-***Expand DL opportunities for students K-12*** to include more children in the district.

"This is the best program for all kids and I wish every kid in this district had the same opportunity."

TWI parent

–Class of 2013

References

ACT, (2013). Why go to college. Retrieved from http://www.actstudent.org/college/

Bearse, C., & de Jong, E. J. (2008). Cultural and Linguistic Investment: Adolescents in a Secondary Two-Way Immersion Program. Equity & Excellence in Education, 41(3), 325–340.

Block, N. (2011a). The Impact of Two-Way Dual-Immersion Programs on Initially English-Dominant Latino Students' Attitudes. Bilingual Research Journal, 34(2), 125–141. doi:10.1080/15235882.2011.598059

Block, N. C. (2011b). Perceived impact of two-way dual immersion programs on Latino students' relationships in their families and communities. International Journal of Bilingual Education and Bilingualism, 15(2), 235–257. doi:10.1080/13670050.2011.620079

Boden, K. (2011b. Perceived Academic Preparedness of First-Generation Latino College Students. Journal of Hispanic Higher Education, 10(2), 96–106.

Buysse, V., Castro, D. C., & Peisner-Feinberg, E. (2010). Effects of a professional development program on classroom practices and outcomes for Latino dual language learners. Early Child hood Research Quarterly, 25(2), 194–206. doi:10.1016/j.ecresq.2009.10.001.

California Department of Education (2012).STAR results. Retrieved from http://star.cde.ca.gov/

California Department of Education (2013a). Standardized Testing and Reporting Program. Retrieved from http://www.startest.org/cst.html

California Department of Education (2013b). CELDT Frequently asked questions. Retrieved from http:// www.cde.ca.gov/ta/tg/el/

Castillo, R. I., & Sanders, J. (2013). The Impact of the Dual Language and Transitional Bilingual Programs on the Texas Assessment of Knowledge and Skills. Journal of Border Educational Research, 4(1).

Cates, J. T., & Schaefle, S. E. (2011). The Relationship between a College Preparation Program and At-Risk Students' College Readiness. Journal of Latinos and Education, 10(4), 320–334.

Chan, R. Y. (2012). College Readiness and Remediation in Higher Education A Policy Brief of California Community Colleges among Hispanic/Latino Undergraduate Students in American Society.

College Board, (2013b). Your SAT today. Retrieved from http://sat.collegeboard.org/home

Collier, V. P., & Thomas, W. P. (2004). The astounding effectiveness of dual language education for all. NABE Journal of Research and practice, 2(1), 1–20.

Creswell, J.W. (2012). Educational research: Planning conducting and evaluating quantitative and qualitative research (Laureate custom ed.). Boston, MA: Pearson Education, Inc.

References (continued)

Howard, E. R., Lindholm-Leary, K. J., Sugarman, J., Christian, D., & Rogers, D. (2007). Guiding principles for dual language education. Washington, DC: Center for Applied Linguistics.

Johnson, D. C. (2010). The Relationship between Applied Linguistic Research and Language Policy for Bilingual Education. Applied Linguistics, 31(1), 72–93.

Lindholm-Leary, K. (2012). Success And Challenges In Dual Language Education. Theory Into Practice, 51(4), 256–262. doi:10.1080/00405841.2012.726053

Lindholm-Leary, K., & Block, N. (2010). Achievement in predominantly low SES/Hispanic dual language schools. International Journal of Bilingual Education and Bilingualism, 13(13-60).

Lindholm-Leary, K., & Borsato, G. (2005). Hispanic high schoolers and mathematics: Follow-up of students who had participated in two-way bilingual elementary programs. Bilingual Research Journal, 29(3), 641-652.

Lodico, M., Spaulding, D., & Voegtle, K. (2010). Methods in educational research: From theory to practice. (Laureate Education, Inc., custom ed.) San Francisco: John Wiley & Sons.

Paciotto, C., & Delany-Barmann, G. (2011). Planning Micro-Level Language Education Reform in New Diaspora Sites: Two-Way Immersion Education in the Rural Midwest. Language Policy, 10(3), 221–243.

Thomas, W. P., & Collier, V. (1997). School Effectiveness for Language Minority Students. NCBE Resource Collection Series, No. 9.

Saunders, W. M., & Marcelletti, D. J. (2013). The Gap That Can't Go Away: The Catch-22 of Reclassification in Monitoring the Progress of English Learners. Educational Evaluation and Policy Analysis, 35(2), 139–156. doi:10.3102/0162373712461849

Appendix B: Interview Protocols

Date: Place:
Interviewee: If parent, student's name:

Parent Interview Questions

Part A. Background

A1. What language do you prefer for this interview?

A2. What is your relationship to your child in the class of 2013 or 2014?
Mother_____ Father_____ Other_____

A3. What year will your child graduate high school?

A4. Is your child enrolled in the two-way immersion program?

Part B. College Readiness

B1. Please discuss your child's academic progress and performance in high school including coursework, grades, and test scores.

B2. Please describe what steps, if any your family has taken to help your child prepare for college.

B3. What steps has your child taken to prepare for college?

B4. Please describe any school activities that have prepared your child for college?

B5. Please describe any additional steps the school has taken to help prepare your child for college?

B6. How prepared is your child for college? Please explain and give details.

B7. Has your child's language development program (mainstream or two-way immersion) had any impact on your child's preparation for college? Please explain.

B8. What has been your expectation for your child after he/she finishes high school?

B9. What do you feel is the school's expectation for your child after he/she finishes high school? Is it the same expectation for all students? Why do you feel that way?

B10. Please describe your child's plans for after he/she finishes high school or his/her experiences since graduation.

Student Interview Questions

Part 1. Background

1.1 What language do you prefer for this interview?

1.2 What is your graduating class?

1.3 Are you/were you enrolled in the two-way immersion program?

Part B. College Readiness

B1. Please discuss your academic progress and performance in high school including coursework, grades, and test scores.

B2. Please describe what steps, if any, your family has taken to help you prepare for college.

B3. What steps, if any, have you taken to prepare for college?

B4. Please describe any school activities, if any, which have prepared you for college?

B5 Please describe any additional steps the school has taken to help prepare you for college?

B6 How prepared are you for college? If you have graduated, how prepared were you when you graduated? Please explain and give details.

B7. Has your language development program (mainstream or two-way immersion) had any impact on your preparation for college? Please explain.

B8. What has been your expectation for yourself for after you finish high school?

B9. What has been your family's expectation for you for after high school?

B10. What do you feel is the school's expectation for you for after high school? Is it the same expectation for all students? Why do you feel that way?

B11. Please describe your plans for after you finish high school or your experiences since graduating high school

Teacher Interview Questions

Part A. Background

A1. What courses do you teach? Are any classes two-way immersion (TWI) courses?

A2. How long have you been teaching?

A3. If you teach in TWI, how long have you been teaching in the TWI program?

A4. If you teach non-TWI courses designed for English Learner students (EL) including Reclassified Fluent English Proficient (RFEP) students, how long have you been teaching those courses?

Part B. College Readiness

B1a. Please discuss your TWI students' academic progress and performance in high school including coursework, grades, and test scores when compared to non-TWI students. Alternatively:

B1b. Please discuss your Initially English Learner (IEL) students' academic progress and performance in high school including coursework, grades, and test scores when compared to non-IEL students. Initially English Learner= EL + RFEP .

B2. Please describe what steps, if any, (TWI or non-TWI IEL) families taken to help their children prepare for college.

B3. What steps, if any, have you taken to prepare your students for college?

B4. Please describe any school activities, if any, which have prepared students for college. Is this any different for TWI (or non-TWI IEL)?

B5 Please describe any additional steps the school has taken to help prepare students for college (TWI or non-TWI IEL)?

B6 How prepared are your TWI (or non-TWI IEL) students for college? How does their level of preparation compare to other students? Please explain and give details.

B7. Has the school's language development program (TWI or mainstream) had any impact on student preparation for college? Please explain.

B8. What has been your expectation for your students for after they finish high school?

B9. What do you perceive to be families' expectations for TWI (or non-TWI IEL) students for after high school?

B10. What do you feel is the school's expectation for TWI (or non-TWI IEL) students for after high school? Is it the same expectation for all students? Why do you feel that way?

Appendix C: Letter Seeking District Approval

DATE OF IRB APPROVAL: June, 2014

Kathy Asher

Assistant Superintendent of Education Service

[redacted] Unified School District

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN SCHOOLS

Dear Ms. Kathy Asher.

My name is Danielle Cortes and I am a doctoral student in the college of education at Walden University. The research I wish to conduct for my doctoral project study involves the effects of a K-12 dual language instruction program on student college-readiness levels. This project will be conducted under the supervision of Dr. Cynthia High and Dr. Lucy Pearson of Walden University.

I am hereby seeking your consent to collect demographic and transcript data as well as interview students (18 and over, no instructional time will be missed), staff, and parents.

I have provided you with a copy of my project study proposal which includes copies of the interview questions, consent forms to be used in the research process, as well as a copy of the approval letter which I received from the Walden IRB committee.

Upon completion of the study, I will submit a program evaluation white paper and prepare a presentation for district stakeholders. It is my hope that this project will provide dual language program data, affirm successes, and make suggestions for continuous improvement. If you require any further information, please do not hesitate to contact me at 805 816-8343 or at daniellecortes@waldenu.edu. Thank you for your time and consideration in this matter.

Yours sincerely,

Danielle Cortes,
Doctoral Student
Walden University

Appendix C: Informed Consent for Interviews

Program Evaluation of the K-12 Two Way Immersion (TWI) Program

You are invited to take part in a research study involving a program evaluation of the K-12 Two Way Immersion Program. The researcher is inviting members of the 2013 and 2014 graduating class, their parents, and high school teaching staff to be a part of this study. This consent form is part of a protective process called "informed consent" to allow you to understand this study before deciding whether to participate. This study is being conducted by Danielle Cortes, who is a doctoral student at Walden University. You may already know the researcher as an employee for [redacted] Unified School District. This study, however, is separate from that role.

Background Information: The purpose of this study is to evaluate your perceptions, experiences, and beliefs regarding the college readiness levels of 2013 and 2014 seniors.

Procedures:

If you agree to this study, you will be asked to answer a few background questions and to participate in individual interviews. The interview will take approximately 30 minutes to one hour to complete.

Here are some sample interview questions:

What has been your expectation for students for after they finish high school?

Has the school's language development program (TWI or mainstream) had any impact on student preparation for college? Please explain.

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your choice of whether or not you will participate in the study. No one at [redacted] Unified School District will treat you differently if you decide not to participate in the study. If you decide to participate in the study now, you can still change your mind later. You may end your participation at any time.